

HOME CINEMA

HIGH-PERFORMANCE SOUND & VISION

Choice



REVIEWS

Anthem MRX
11-channel AVR
Acer projector
Panasonic
ALL70 soundbar
Pioneer Dolby
Atmos amp
Optoma DLP

ULTRA HD INVASION!

Affordable 4K flatscreens on test
Plus Samsung and LG high-end TVs

**NEW TECH
COMING SOON...**

JVC laser PJ, Philips OLED,
8K TVs, see-thru speakers

FIGHT CLUB!

Captain America:
Civil War lands its
blows on BD, p98

FILM & TV

- SCREAM QUEENS
- THE NICE GUYS
- WARCRAFT
- ARROW ■ THE FLASH
- MAN OF STEEL 4K

Sky 4K FAQ

Everything you
need to know

Retro cinema

Remembering Super 8

INSIDE BUYERS' GUIDE → HOW TO SET UP YOUR SPEAKERS → READER'S
CINEMA ROOM → PS4 PRO → OPINION → COLLECTING... NEO NOIR → SHARP TV

www.homecinemachoice.com

ISSUE 265 NOVEMBER 2016 £4.99
AUS - \$13.50 NZ - \$14.99 CAN - \$17.00



ELAC

The life of sound.



Experience music as never before.
Discovery Music Server DS-S101-G



Control up to eight zones in your own ELAC network or wireless via AirPlay. Your music, as you like it. It's so simple.



The Discovery Music Server is easy to use by the Roon Essentials App on your tablet, smartphone or PC/MAC.



Between users and across devices, you can select from downloads, ripped CDs and streaming services. Your collection is supported by a rich library of images and information.

The Discovery Music Server is designed to be the heart of a serious music system, offering playback of local and streaming music, rich multi-dimensional metadata and multi-room audio, all with an interface that anyone can master in a few minutes.

One component, infinite sound. Discovery Music Server DS-S101-G - Multiroom with passion.

Distributed by Hi-Fi Network Ltd.

01285 643088

www.hifi-network.com

info@hifi-network.com

[f](#) [t](#) HiFiNetworkLtd

www.elac.com

HOME CINEMA Choice

www.homecinemachoice.com

EDITORIAL TEAM

Editor Mark Craven
mark.craven@homecinemachoice.com
Deputy Editor Anton van Beek
anton.vanbeek@homecinemachoice.com
Art Editor John Rook

CONTRIBUTORS

Steve May, John Archer, Tekura Maeva, Ed Selley,
Jon Thompson, Richard Stevenson, Danny Phillips,
Martin Pipe, Martin Dew
Photography Mike Prior, Claire Collins

ADVERTISING

Advertising Sales Executive Sonia Smart
Tel: 07710 394391
E-mail: sonia.smart@hifinews.com

Advertising Sales Executive Simon Dunn
Tel: 01689 869853
E-mail: simon.dunn@hifichoice.co.uk

MARKETING AND SUBSCRIPTIONS

UK: New, Renewals and Enquiries
Tel: 0344 243 9023
E-mail: help@hcc.secureorder.co.uk
USA & CANADA:
Toll Free: 001 866 647 9191
REST OF WORLD: New, Renewals and Enquiries
Tel: +44 (0) 1604 828 748
BACK ISSUES
www.mags-uk.com

MANAGEMENT TEAM

Group Editor Paul Miller, paul.miller@avtechmedia.co.uk
Group Sales Manager Rhona Bolger
Subscriptions Manager Kate Hall
Chief Executive Owen Davies
Chairman Peter Harkness

Published by AVTech Media Ltd

Suite 25, Eden House, Enterprise Way
Edenbridge, Kent, TN8 6HF
Tel: 0844 412 2262
From outside the UK: +44 (0) 1689 869 840

Distributed in the UK by Seymour Distribution Ltd

BACKGROUND WALL IMAGES:
©SHUTTERSTOCK.COM
©ISTOCKPHOTO.COM



Home Cinema Choice, ISSN 1359-6276, is published monthly with an additional issue in May by AVTech Media Ltd, a division of MYTMEEDIA Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent, TN8 6HF, UK. The US annual subscription price is £66GBP (equivalent to approximately \$98USD). Airfreight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. US Postmaster: Send address changes to Home Cinema Choice, Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Subscription records are maintained at CDS GLOBAL Ltd, Tower House, Sovereign Park, Market Harborough, Leicestershire, LE16 9EF. Air Business Ltd is acting as our mailing agent.



When you have finished with this magazine please recycle it.



If you can't always find a copy of this magazine, help is at hand! Complete this form and hand in at your local store, they'll arrange for a copy of each issue to be reserved for you. Some stores may even be able to arrange for it to be delivered to your home. Just ask!

Subject to availability

Please reserve/deliver my copy of Home Cinema Choice on a regular basis, starting with issue:

Title _____ First name _____

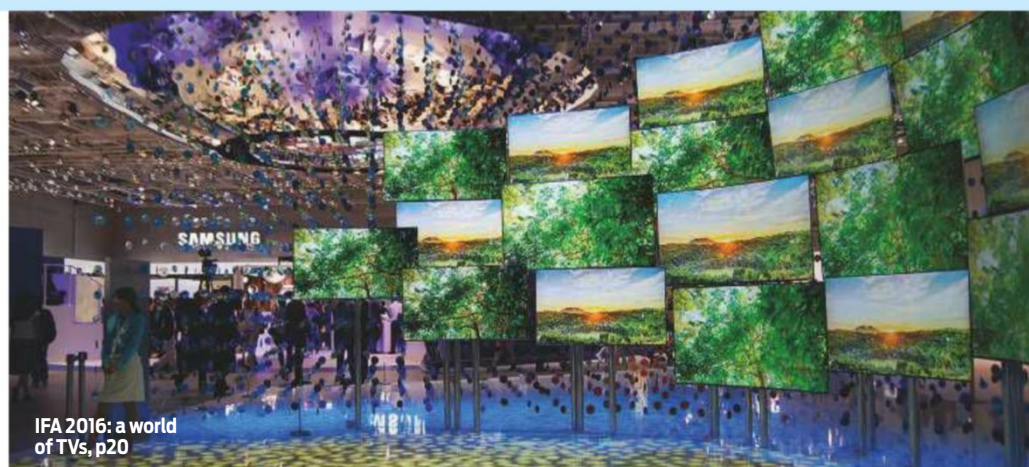
Surname _____

Address _____

Postcode _____

Telephone number _____

If you don't want to miss an issue



IFA 2016: a world of TVs, p20

Welcome

The weather may be cooling down as Summer segues into Autumn, but the world of 4K home entertainment is really hotting up. JVC has announced its first native 4K resolution laser projector, Panasonic is adding to its lineup of Ultra HD Blu-ray players, and **Sky's 4K satellite/download service has arrived showcasing serious intent**. We report on the latter in our Sky 4K FAQ on p30, while our IFA show report (p20) rounds up the news from Europe's biggest tech show.



As for TVs, 4K is now the default technology for new screen buyers, and this issue we look at six such models. In our 55in group test (p59), a quartet of affordable TVs go head-to-head. And for those with bigger budgets, we focus on Samsung's flagship KS9500 – our cover star – and LG's scintillating 65in E6 OLED. Picking between these two TV titans is tough. The good news is that each has its own clear reason to buy. The greedy will just want both!

Mark Craven
Editor



MENU



CONTRIBUTORS



John Archer:
The UK's most experienced TV tester cut his teeth as an early HCC staffer



Jon Thompson:
Film producer and post-production expert delves deep into Hollywood and AV



Steve May:
HCC's former Editor-in-Chief is one of the UK's most respected AV journo



Martin Pipe:
Technical expert Martin is renowned throughout the home cinema industry



Richard Stevenson:
Industry veteran and former Editor of UK CE trade journal ERT



Adrian Justins:
Made his name as the editor of *What Video & TV* and *What Home Cinema*

FEATURES

In-depth interviews and special reports. Starts... p20

COVER STORY

20 The big AV stories from IFA '16

The hottest kit from Berlin's annual tech expo

COVER STORY

26 When home cinema was Super

Remembering the days of Super 8mm film

COVER STORY

30 Sky Q 4K: What you need to know

Your guide to the tech, content and costs

34 Movie room makeover

Basement cinema gets a 4K upgrade

88 Certified: AV-Holic

Another HCC reader shares their AV setup

SELECT

The place to look if you're planning to buy some new AV gear. Starts... p111

111 Gear guide

HCC's comprehensive Top 10s list only the very best kit money can buy

BULLETIN

The place for hot products, trends and technology. Starts... p7

07 Eleventh heaven

Onkyo's RZ series 11-channel processor

08 B&O gets appy with Android TV

Luxury brand's 4K TV is smarter than most

09 xTV is cinematic ecstasy

Ultra short throw projection comes of age

10 PS4 Pro snubs 4K Blu-ray

Revamped console won't spin UHD discs

12 TV legends return to the UK

Toshiba and Sharp announce partnerships with European TV manufacturers

14 4K Blu-ray bites back!

The Shallows surfaces on Ultra HD Blu-ray

16 Back of the 'net

Trailers and tech to check out on the web

17 Swiss roll into UK

Classic loudspeaker range is coming soon

REGULARS

Whether you want our opinions or your own, here's where to look. Starts... p75

75 Digital copy

Mark Craven won't abandon 24fps just yet

76 Film fanatic

Anton van Beek mourns for Metrodome

78 In the mix

Jon Thompson opens a box of AV delights

80 How to... Set up your speakers

Tips to make your system sound great

84 Feedback

Share your thoughts with other AV addicts

122 AV Avenger

Steve May asks if it's game over for 4K BD

COMPETITIONS

86 Great Blu-rays to be won!

American Horror Story: Hotel, *Cat People* and *Green Room*



52

'The best LG TV we've ever seen and the spiritual successor to the Kuro plasma line'



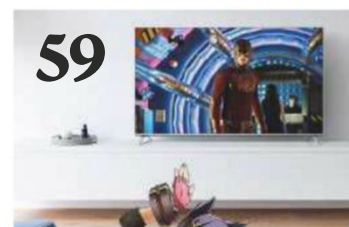
40



44



56



59

REVIEWS

With a focus on performance, these are in-depth tests you can trust... p39

COVER STORY

40 Samsung UE65KS9500

Spectacular 65in 4K flatscreen shows what High Dynamic Range and wide colour spectrum technologies can really achieve

44 Anthem MRX 1120

Flagship 11-channel AV receiver bolsters its visceral Dolby Atmos performance with smart room calibration tools

48 Pioneer VSX-1131

Mid-range networked amp that caters to seven-channel cinemas

COVER STORY

52 LG OLED65E6

With Dolby Vision HDR and 3D onboard, is this LG OLED the world's most advanced TV?

56 Panasonic SC-ALL70T

Feature-packed streaming soundbar also has multiroom aspirations

COVER STORY

59 Grouptest: Ultra HD without an ultra high price

Four affordable TVs from Panasonic (TX-55DX650 and TX-58DX700), Philips (55PUS7101) and Samsung (UE55KS7000) do battle to prove that you don't have to spend a fortune to enjoy 4K thrills

66 Optoma H183X

This low-cost HD Ready projector is still an accomplished movie machine

67 Roth Audio Sub Zero III

The lack of a subwoofer doesn't prevent this soundbar from creating bass-rich sonics

70 Acer P6200S

Can this high-brightness 'large venue' DLP projector satisfy our bigscreen desires?

72 Roberts R100

Multiroom speaker marries FM/DAB radio with Spotify and wireless streaming

PLAYBACK

The latest Blu-rays, DVDs and videogames reviewed and rated. Starts... p95

- 96 The Nice Guys
- 97 Gods of Egypt 3D
Green Room
Narcos: Complete Season One
The Martian: Extended Edition
- 98 Captain America: Civil War 3D
- 100 God Eater 2: Rage Burst
Legends of Tomorrow: The Complete First Season
Arrow: The Complete Fourth Season
The Flash: The Complete Second Season
- 101 Warcraft: The Beginning
- 102 Matinee; A Hologram for the King;
Dead-End Drive-In; Sid & Nancy: 30th Anniversary Edition; Man of Steel [4K]
- 104 Ash vs Evil Dead: The Complete First Season
- 105 The Almodóvar Collection; Canyon Passage; Buster Keaton: The Complete Short Films 1917-1923; Women in Love; The Glass Key
- 106 The Hills Have Eyes: Limited Edition; Cat People; Scream Queens: The Complete First Season; American Horror Story: Hotel
- 108 **COLLECTING...** L.A. noir
10 of the best thrillers set in the City of Angels to add to your Blu-ray collection

LG OLED TV 4K



NOT JUST A NEW TV. A WHOLE NEW CATEGORY OF TELEVISION.



OLED's next generation pixel construction allows for unique screen architecture which is so light and thin it can be bonded to a transparent piece of glass.

This stunning television produces an incredible picture with infinite contrast that is complimented by an innovative sound bar stand that produces superb audio.

A masterful television from LG's award winning OLED TV range.

lg.com/uk/discoveredoled



HDR 4K
WITH
DOLBY VISION

What the Experts Say



LG 65EG960V
2015-2016



LG OLEDC6V
MAY 2016



LG OLEDE6V
JUNE 2016



LG EG960V
JUNE 2015



LG EC970V

Model shown E6

BULLETIN

→ **News Highlights** **BANG & OLUFSEN** Android-powered UHD TV breaks cover **SIM2** Hands-on with high-end ultra short throw projector **TOSHIBA/SHARP** Japanese TV brands planning UK return **PIEGA** Classic Swiss speakers on the way **NEWS X10** The hottest news stories in bite-sized chunks **THE SHALLOWS** Shark thriller takes a bite out of 4K Blu-ray & MORE!

Eleventh heaven

Onkyo PR-RZ5100 → www.onkyo.co.uk



Spearheading Onkyo's new RZ series, the 11.2-channel PR-RZ5100 network controller is ready to act as the hub of the most demanding home cinema setups. Priced around £2,500, this THX Ultra2 Plus-certified flagship processor features balanced XLR and unbalanced phono pre-outs, HDR-ready HDMI switching, AccuEQ system calibration and a plethora of streaming options including Google Cast and Bluetooth. And, as you'd expect, this stonking Onkyo offers 7.2.4 support for DTS:X and Dolby Atmos.

HCC ONLINE...

For breaking AV news, blogs, features and reviews visit www.homecinemachoice.com
Follow us on Twitter @hccmag
Like us on Facebook
facebook.com/homecinemachoice

B&O gets appy with Android TV

Bang & Olufsen BeoVision 14 → www.bang-olufsen.com

Android TV is now a luxury proposition courtesy of Bang & Olufsen's BeoVision 14. Available in 40in and 55in models (£5,000 and £6,500 respectively), this Ultra HD LED-lit flatscreen mixes Android's smart functionality and operating system with a low-slung three-way speaker array, BeoLink Multiroom integration, anti-reflective panel design and various stand and finish options.

**ARROW:
SEASON 4**
Action-packed
TV series hits the
AV bullseye on
Blu-ray, p100



Streaming soundbar



French speaker specialist Cabasse has added a new soundbar to its Stream range of multiroom kit.

The Stream BAR packs two tweeters and four midbass units into its slender chassis – and is joined by a 100W wireless subwoofer. The soundbar also offers HDMI connectivity (with ARC), plus Bluetooth aptX, Wi-Fi and Ethernet for 'net streaming and network audio functionality. The Stream BAR is available in the UK via Connected Distribution, priced £900.

www.connecteddistribution.com

B&W untethers P7 'phones



Bowers & Wilkins is expanding its range of headphones with the introduction of the P7 Wireless. As the name suggests, they build on the brand's earlier P5 Wireless and P7 over-ear headphones and can be paired with any

Bluetooth-enabled device, using aptX connectivity. Priced £320, the new P7 Wireless cans promise 17 hours of playback from the rechargeable battery, employ memory foam cushions for improved comfort and ship with a carry case to keep them safe when not in use.

www.bowers-wilkins.co.uk

xTV is cinematic ecstasy

SIM2's latest takes ultra short throw projection to another level

Is the world of home cinema ready for an ultra high-end ultra short throw projector? SIM2 thinks it is. With a number of brands now repurposing the technology for media room and gaming use, the Italian company has taken the concept to another level entirely with the unapologetically posh xTV, and HCC was first in line to get an early hands-on.

The xTV, which sells for a paltry £14,000, is essentially a large trapezoid-shaped glass box that can throw images between 85in and 110in across, when placed close up to a wall. It uses a hybrid laser light engine coupled to a single-chip 1080p DMD device. The laser engine gives virtually instant-on, with vibrant colour fidelity.

'We see ultra short throw projectors as a very different category of product,' CEO Maurizio Cini told HCC. 'Our concept is not to compete with a flatpanel or front projector. If you have an area with high ambient light, you can use the xTV with a fixed high-brightness screen that makes the picture brighter than a TV. Or more likely you can use it on a white wall.' When it comes to compatible décor, Cini suggests that 'white is ideal, but grey is fine, maybe even a little colour – but just not red.'

The xTV looks swisher than the average projector. The unit features a crystal glass top blessed with a variety of coatings to ensure it remains scratch-free. The cabinet is large (53cm wide) and weighs a not insubstantial 13.5kg. But while the xTV is big, it can be built into furniture, or mounted on a ceiling. The idea is that this display remains largely unseen.



Maurizio Cini: 'We have had many enquiries from yacht owners, because we can make the xTV completely waterproof'

The projector is rated at a bright 2,900 Lumens. While at its best in a dark room, the xTV can cast a watchable image in rooms

with some ambient light.

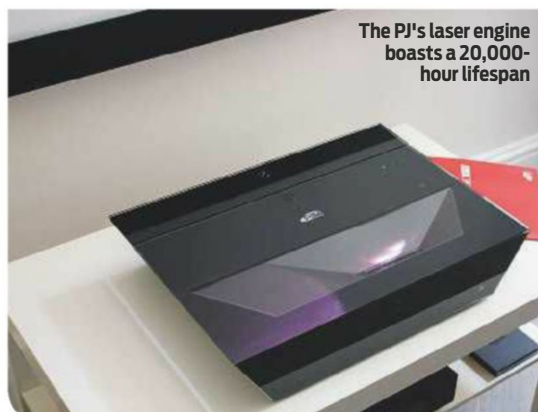
Unusual installations

SIM2 projectors are famed for their optical prowess, and a lot of the technology seen on its conventional home cinema fleet is evident here. We ran Blu-rays and streaming HD video from Netflix and Amazon through the xTV, and both looked terrific. But this projector is capable of tricks not commonly seen in the home. Its unconventional form factor lends itself to unusual installations, particularly when multiple xTVs are coupled with a warping image processor.

'We're working on an installation in Miami that will use five models built into a very long dining table,' revealed the SIM2 CEO. 'During the day visitors just see a room with standard furniture, but in the evening they can enjoy a very long video wall.'

The xTV also suits marine AV applications, he adds, as it's essentially a completely sealed glass unit. 'We've had many enquiries from yacht owners, because we can make it completely waterproof,' he says.

While the xTV launches in HD guise this Autumn, HCC was told that there could be a second 4K/UHD version within a year.



The PJ's laser engine boasts a 20,000-hour lifespan

Playlist...

Team HCC spins up its disc picks of the month

Batman v Superman: Dawn of Justice (Ultra HD Blu-ray)

When it comes to Ultra HD and Dolby Atmos home cinema demo discs, this super-powered comic book blockbuster packs a heck of a punch!



The Jungle Book (All-region BD)



Disney's live-action update of the classic cartoon runs wild on Blu-ray with pristine visuals and powerful DTS-HD MA 7.1 audio.

Count Yorga Collection (Region B BD)



This splendid HD platter includes high-quality presentations of both *Count Yorga* and its sequel, plus some smart bonus goodies.

Sing Street (Region B BD)



John Carney's feel-good musical hits all the right notes on BD due to a strong AV performance.

Florence Foster Jenkins (Region B BD)



Meryl Streep is excellent in this witty true story about an awful, yet inspirational, 1940s singer.

At the 'plex...

Heading out to see a flick?
Catch these this month

Miss Peregrine's Home for Peculiar Children

September 30: Director Tim Burton serves up another freaky fantasy with this tale of an orphaned boy who ends up at a bizarre home for kids with mysterious abilities.

The Girl on the Train

October 5: This adaptation of Paula Hawkins' best-selling novel stars Emily Blunt (*Sicario*) as a woman who gets caught up in a deadly mystery after witnessing a crime from the window of the train she takes to work.

Jack Reacher: Never Go Back

October 21: Edward Zwick gets behind the camera for this sequel to the 2012 box office hit. This time around, Tom Cruise's tough guy heads back to his old military HQ where he's accused of a 16-year-old homicide and must prove his innocence.

PS4 Pro snubs 4K Blu-ray

New console won't spin UHD media, favours streaming instead

It was only last month that we wrote in *HCC* that Sony's forthcoming PlayStation 4 console revamp would most likely support 4K Blu-ray playback. Yet following the official launch of the console in early September that hope has been dashed, to much head-scratching from AV enthusiasts.

First up, some facts. The new PS4 isn't called the PS4 Neo or PS4.5, as early rumours had suggested, but PS4 Pro. Described by Sony as a 'super-charged PS4', it's available for pre-order (shipping expected November 10) for £350. It will be the upper-tier PlayStation option, joined by a new £260 model that is essentially a thinned-down version of the original fourth-gen console with some minor hardware spec tweaks.

Gamers will surely dig the PS4 Pro's updated innards and feature set.

Introducing something that many felt should have been a facet of the debut PS4, the console will offer 4K gaming support, while HDR content (HDR 10) is also on the menu.

Backwards compatibility with the existing PS4 base means there will be no specific 'Pro' game releases. All PS4 titles will play on both consoles, with developers able to use the machine's increased processing power (it will employ a 4.2-teraflop graphics engine) to up frame rates (and frame-rate stability), and increase graphic detail, even on 1080p displays.

Sony says that 'virtually all' new PS4 game releases will be able to take advantage of the console's capabilities, either from their launch date or via a downloadable update. Titles previously released set to be updated included *Uncharted 4: A Thief's End*, *The Last of Us: Remastered*, *Infamous: Second Son* and *Deus Ex: Mankind Divided*.

Away from games, the PS4 Pro will feature 4K video streaming, with apps currently being developed for Netflix and YouTube. Yet there is no support for Ultra HD BD, a surprise considering the PS3's history as a Blu-ray evangelist and Sony's involvement with the format both in terms of software releases and the Blu-ray Disc Association.

Reasoning for the omission centres on the popularity of streaming video over physical disc. Sony Interactive Entertainment honcho Andrew House remarked in an interview with *The Guardian*:

'Our feeling is that while physical media continues to be a big part of the games business, we see a trend on video towards streaming... so we place more emphasis on that area.'

All this means that the console, while certainly being of interest to gamers with 4K aspirations, looks set to play second fiddle to Microsoft's Xbox One S in the hearts of home cinema aficionados, even if that deck doesn't feature

native 4K
gaming
support.



Sony's PS4 Pro: not a fan of 4K Blu-ray

Winners celebrate at EISA Gala

Ceremony during IFA show awards best in home cinema hardware

Following their announcement on August 15th, the winners of the 2016-2017 EISA awards congregated at the annual EISA Gala on the Friday evening during Berlin's IFA technology show.

Attendees from the likes of Panasonic, LG, Sony, Denon, DALI, Monitor Audio, Yamaha, BenQ and Bowers & Wilkins were presented with their sought-after trophies, during a night where the best-in-breed products from Home Theatre, Hi-Fi, Mobile, In-Car and Photographic categories were celebrated. *HCC*'s editor Mark Craven was on stage at the event, in his role as manager of the Home Theatre Video expert group.

EISA is the unique association of over 40 special interest magazines and websites from across Europe. Established in 1982, its independent awards are now into their 34th year.

www.eisa.eu



FOR WHEN LENGTH MATTERS...

THE ONLY CHOICE IS QED.



**Need a long run of HDMI
without the of booster
boxes, USB power supplies or
an expensive installation?**

**...the only choice is
QED Performance Active HDMI.**

Guaranteed High Speed, Full 4K Ultra HD and 3D certified up to and including 15m. Utilising QED's proprietary 'Active Filter Technology™' to achieve the certified High Speed standard and 18 Gbps compatibility.

There is now no need for power supplies or boosters because the QED Active Filter chip set built into the HDMI headshell connection runs from the power supplied by the HDMI connection itself. To do this it uses a patented "power harvesting" technique resulting in a transmission speed capable of achieving the latest 4K latest features where competitors are only capable of standard speed HD ready signals at longer lengths.

www.qed.co.uk/when-length-matters

QED



Est. 1973

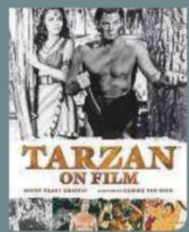
www.qed.co.uk



Extras...

Small items that could make a big impression...

Tarzan on Film



Arriving on shelves just in time to prepare you for the DVD and Blu-ray debut of *The Legend of Tarzan*, author Scott Tracy Griffin's over-sized guidebook explores the ape-man's many adventures on the big and small screen. Be it silent classics, the iconic Johnny Weissmuller films or the Disney cartoon series, no stone is left unturned – all of which makes for a fascinating read that is well worth the £30 asking price.

Game of Thrones Colouring Book



Relive your favourite moments from HBO's hit fantasy series with this 60-page collection of 35 black and white illustrations, ready and waiting for you to add a splash of colour (we expect you'll need an awful lot of red crayons). Grab a copy for £12 when it hits the shelves on November 1.

LEGO Death Star



Millions of voices cried out in terror and were suddenly silenced last year when LEGO announced that it was retiring its legendary Death Star set. Thankfully, it has now released an updated version of this set with a slightly tweaked build (incorporating 213 new pieces, bringing the total brick count to a whopping 4,016!) and a new selection of 23 minifigures. The finished model measures over 16in tall and will set you back an equally hefty £400.

TV legends return to UK

CE brands Toshiba and Sharp partner with European TV manufacturers

Two familiar TV brands are returning to the high street. Toshiba and Sharp were early casualties of the disintegrating Japanese consumer electronics business, but both now seem keen to return, having struck partnerships with key European television manufacturers. It would appear that the appeal of booming 4K/Ultra HD TV sales is just too strong for these marques to resist.

Toshiba threw in the towel a year ago, following a series of disastrous financial returns that it blamed on 'harsh price competition.' In the US the company promptly licensed its brand to Taiwan's Compal Electronics, but effectively went dark in multiple other territories. Only its Japanese arm continued to produce TVs for local consumption.

Now the company has entered into a strategic partnership with Turkish OEM giant Vestel (owner of the Finlux brand), which will see Toshiba screens make a welcome return to UK stores. Vestel says it will work closely with Toshiba's research and development team to regrow the marque – using 'Toshiba's excellent brand heritage, design and engineering capabilities.' The first entry-level screens from the partnership are now available through Argos, with models for 2017 currently in development.

At the Sharp end...

Simultaneously, Sharp is partnering with Slovakian manufacturer Universal Media Corporation (UMC). Sharp itself was recently acquired by Foxconn, headquartered out of Tapei, having previously sold its brand license to UMC, but it seems its ambitious parent wants to get back into the TV business.

Rather than just sell a badge, Sharp appears keen to invest its own proprietary screen technology (of which it has loads) into this new European

adventure. At the recent IFA tech fair (see p20) in Berlin, representatives from Sharp Japan and UMC showed a wide range of concept products, along with a variety of screens expected to debut in the UK before the end of the year.

Incoming are 4K/Ultra HD sets from 43in to 75in. Sharp says its flagship CUF8772 series will support HDR 10 content. Connected TVs will come with both the Aquos Net+ smart platform and Freeview Play. Interestingly, all of the new Sharp sets from 32in upwards will feature audio systems developed by Harman/Kardon, another new partnership.

UMC has also teased some high-concept models that mix innovative design concepts (an oval TV display, anyone?) with 4K and 8K screens that utilise Sharp's low-power IGZO (Indium, Gallium, Zinc and Oxygen) display technology. IGZO has been in development for several years, but with Ultra HD models it's time appears to have come.

Compared to a conventional LCD panel, the space between the single pixels on an IGZO TV is 20 per cent lower. This means it's possible to fit more pixels in a display area, thereby increasing pixel density. To prove the point, Sharp displayed both an 85in 8K IGZO panel, and a 27in 8K IGZO monitor. Image quality on both was stunning.

UMC also unveiled a variety of virtually frameless displays. TVs with rounded edges are also possible, it teased. The company also showed small, high-res interactive LCD dials, indicating that the automotive market is also in its sights.

Sascha Lange, VP of marketing and sales, says the brand is 'aiming to introduce Sharp IGZO TVs to the European market within the next two years.'



As well as new TV tech, Sharp is also working on interactive LCD in-car displays (inset)

This month's top 10 news stories in handy, bite-sized chunks...



Netflix's *The Ridiculous 6*

1 Living with SVOD services

The results from the latest 'Living with Digital' consumer survey undertaken by Futuresource Consulting reveal an increase in people opting to use more than one SVOD service. The figures show over half of Netflix subscribers polled in the UK and the US also using Amazon Prime Video. The survey also indicates that comedy movies are the favourite genre among Netflix subscribers; looks like the service was right to bankroll Adam Sandler's *The Ridiculous 6* after all...

2 Screen rivals partner on 8K

Panasonic and Sony have entered into a partnership with broadcaster NHK to begin planning the roll-out of 8K Super Hi-vision TVs to Japanese consumers in time for the 2020 Tokyo Olympics.

The partnership is seen as an 'all-Japanese alliance' designed to reclaim market share lost to Korean and Chinese competitors.

3 Xbox One S correction

In our review last issue, we reported that Microsoft's 4K-capable Xbox One S console wouldn't play 3D Blu-rays. Since then, we've been notified by Microsoft that this was due to a bug (dependent on whether the console had been used to spin UHD Blu-rays) which has now been fixed. So your 3D collection is safe.

4 Spotify connects with Sonos

Sonos is finally bringing Spotify Connect to its multiroom speakers. The update is due to go live with a beta software release in October and will give the Spotify app full control of your Sonos setup. Sonos has also revealed that it will be adding support for Amazon Echo in 2017.

5 Warner Bros. censors itself

Warner Bros. has asked Google to remove its own website from search results, claiming that it violates copyright laws. The request was submitted on behalf of the Hollywood studio by content protection specialist Vobile, which has also asked for the removal of links to legal streaming sites such as Amazon and Sky. What a mess!

6 Latvia tops piracy list

The latest figures from piracy tracking firm Muso suggest that 46 per cent of all internet users in Latvia have used the web to access illegal content, putting it at top spot on the list of pirate-heavy countries when adjusted for connected population (the US is still the world leader in terms of the sheer number of visits to illegal streaming and torrent sites). Ireland comes eighth on the list with 20 per cent, while the UK does much better, landing in 31st place with just seven per cent.

7 De Palma delayed

Arrow Video has delayed its Blu-ray release of Brian De Palma's *Raising Cain*. Originally set for shops in September, the disc will now be released next January, sparking rumours that Arrow's disc will feature the director-approved fan-edit of the film that restores De Palma's original vision, and is already included as an extra on Shout Factory's US Blu-ray.

8 Tannoy stays in Scotland

The production of Tannoy's Prestige speakers will continue in Scotland, and not head to China as audiophiles had feared following the company's purchase by new parent MUSIC.

9 Recording to the cloud

Bush has freed the DTV recorder from the tyranny of hard drives with a new device. The new £100 Bush Digital TV Recorder with ShowDrive uses cloud storage service instead, with two subscription packages available: 'Basic' offers 35 hours of HD content storage for £1.99 per month, while 'Deluxe' gives users 350 hours of HD content storage for £5.99 per month.

10 Doctor Who gets animated

BBC Worldwide has revealed that it will be releasing an animated version of the lost *Doctor Who* serial *The Power of the Daleks*. First broadcast in 1966, the six-part story marked the debut of Patrick Troughton's Doctor, but only an off-air recording of the soundtrack exists today. The animation will debut on the BBC Store on November 5 (the story's 50th anniversary) before making its DVD bow on November 21.



Premiere...

What's happening in the world of TV and films...

MiB crossover dead?



It appears that the *Men in Black* and *21 Jump Street* crossover may not happen after all. Jonah Hill has confirmed that 'they're trying to make all the deals, but it's kind of impossible with the *MiB* stuff.'

Gambit movie loses second director

Edge of Tomorrow's Doug Liman has become the second director to walk away from Fox's troubled *X-Men* spin-off *Gambit*, which was scheduled to start filming next year. Instead, it's being reported that Liman has signed on to direct DC's *Justice League Dark* movie.

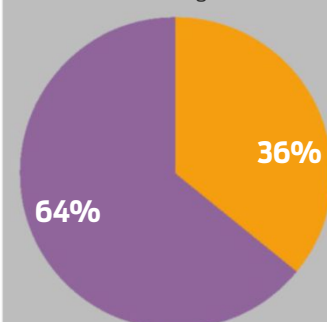
Marvel adds girl power

Marvel Studios is getting all of the players in place for its first female-led film, *Captain Marvel*. Brie Larson has been signed to play the titular hero, with Nicole (Guardians of the Galaxy) Perlman and Meg (Inside Out) LeFauve on scripting duties. Meanwhile, Niki Caro, Leslie Linka Glatter and Lorene Scafaria are the frontrunners to helm the movie.

We asked...

Do you play videogames on your home cinema?

- Yes – it's only natural given the HD visuals and surround audio
- No – my home cinema setup is reserved for watching movies!



Results from www.homecinemachoice.com
Go online for more polling action



4K Blu-ray bites back!

The Shallows → Sony Pictures → Ultra HD Blu-ray, All-region BD & R2 DVD

Just when you thought it was safe to go back into your home cinema, along comes the best killer shark movie since *Jaws*. Starring Blake Lively as a surfer trapped a short distance from shore by a hungry great white shark, *The Shallows* is set to surface on DVD, Blu-ray and Ultra HD Blu-ray (the latter sporting a Dolby Atmos mix) in the UK in December. But if you can't wait that long, the film has already hit disc in the US and is available to import right now!





Primare 4KVM

The Primare 4KVM video module brings the expansive world of 4K UHD video to our award-winning multi-channel preamplifiers and integrated amplifiers.

Capable of providing four times the resolution and considerably higher frame rates than 1080p HD, 4K video promises a more involving viewing experience, with greater clarity, color depth and dynamic range.

Delivering on that promise, the 4KVM features six configurable HDMI inputs feeding two ARC enabled HDMI outputs, with matrix switching and HDCP2.2 compliancy.

Available in all new SP33 multi-channel preamplifiers and SPA23 multi-channel integrated amplifiers, the module is available for easy installation in existing SP33 and SPA23, as well as the preceding SP32 and SPA22, models.

Pair any 4KVM enabled product with our award-winning BD32 MKII 4K upsampling universal disc player and streamer for a level of video performance that will provide for a truly eye-opening experience.

Contact Karma or visit our room, Buckingham 2, at The HiFi Show to receive a savings coupon redeemable at your favourite local stockist.

To learn more, go to primare.net



FIND
MORE
FREE
MAGAZINES

[HTTP://SOEK.IN](http://soek.in)

Face to Face

Topics of discussion on the HCC Facebook page

We told you JVC's 4K laser PJ was £30K...



What???

Jeffrey McCann

Ouch! And that's exactly why I'll be watching downscaled 4K on my 1080p projector!

Bryan Peck

I'm saving up for the Sony 100ZD9 TV at £60,000...

Mark Edwards

Give them a few years, they'll be falling out of cornflake boxes.

Paul James Barraclough

Its not an investment – it's most likely already outdated!

Andy Summers

What you're watching on your home cinema...



The recent *Fantastic Four* movie in 4K – what a load of old tosh.

Mark Edwards

Season One and Two boxset of *Orange is the New Black*. Not at all like *Prisoner Cell Block H*!

Robert Corrigan

The Revenant, finally. Brutal and beautiful.

Matt Greaves

While at IFA, we watched some of the Statham flick *Killer Elite* dubbed into German...

Home Cinema Choice

The Jungle Book and *The 5th Wave*.

Chris Sayles



Jungle Book [2016], *The Nice Guys*, *The Hateful Eight* and *The Revenant*.

Ian Cooper

Batman v Superman: Dawn of Justice.

Matthew Dennehy



Join in the fun

Like our page at facebook.com/HomeCinemaChoice

Back of the 'net

Trailers, technology and more to check out on the web



Old-school Affleck

Live by Night marks the third time Ben Affleck has got in the director's chair (following *The Town* and *Argo*), and as this early trailer shows it's shaping up to be a lavish, Prohibition era-drama (using 65mm photography), with Affleck starring as a Florida-based bootlegger. Out in cinemas January, 2017.

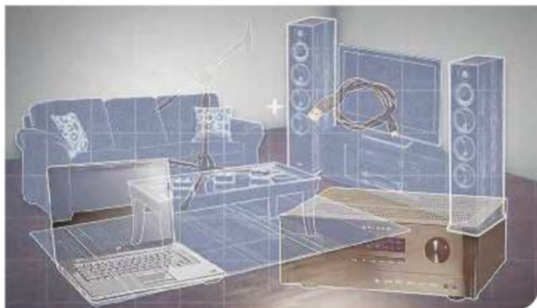
[Youtu.be/vwejn3sCM](https://youtu.be/vwejn3sCM)



Beckinsale's back

The *Underworld* franchise returns for a fifth helping (*Underworld: Blood Wars*) in February, with Kate Beckinsale once again donning the black leathers and toting her handguns as she battles those pesky werewolves. Rumour is that if this flick hits big there'll be a sixth one on the way.

[Youtu.be/FtbM_W9iNjg](https://youtu.be/FtbM_W9iNjg)



Singing the Anthem

Anthem's MRX-1120 receiver, reviewed on p44, features the brand's advanced ARC (Anthem Room Correction) EQ system. In this vid, Anthem explains the science behind the tech – derived from testing at Canada's National Research Center – and the impact that a room will have on a speaker's sound.

[Youtu.be/41XjrGgZCNI](https://youtu.be/41XjrGgZCNI)



Drive-in disaster!

'And stuntman Peter West gets it in the gonads.' Just a small tidbit of info culled from the director's commentary track accompanying Arrow Video's BD release of 1980s cult flick *Dead End Drive-In*. This teaser video gives a taste of what buyers of the Blu can expect – see p102 for more.

[Youtu.be/jUQHtYQj1hY](https://youtu.be/jUQHtYQj1hY)



TOP PICK

Home cinema, 30 years ago

'There's something about the drama of combining the bigscreen with the comfort of your own home,' says Michael Parkinson as he introduces this six-minute feature about Super 8 cinema fans from an episode of *Film 86*. We love the household with three separate screening rooms.

[Youtu.be/J-059iLCjx4](https://youtu.be/J-059iLCjx4)



The sound of Britain

Cambridge Audio blows its own trumpet in this coolly-put-together video, dubbed *Great British Sound*, that traces the origins of music delivery from the 1930s through the Swinging Sixties (and the birth of its P40 amplifier) to our modern digital age. Warning: may have you digging out your vinyl collection.

[Youtu.be/0uAVQtnXVeM](https://youtu.be/0uAVQtnXVeM)

Swiss roll into UK

Piega Classic → www.piega.co.uk

Switzerland's high-end loudspeaker brand Piega is coming to the UK, starting with its ribbon-tweeter totting Classic range. Pictured below are the Classic 7.0 floorstander (equipped with 7in bass and midrange drivers), the slightly smaller Classic 5.0 (utilising 5in bass and midrange drivers), the Classic 3.0 standmount and the Classic Centre Large. The speakers are available in a choice of black, white or Makassar finishes, with prices starting at £900 for a pair of the Classic 3.0s.



Great Savings

when you **subscribe** to *Home Cinema Choice* today



13 issues **delivered to your door**

Great savings on the shop price

Download each new issue to your device

A **74% discount** on your Digital subscription

Access your subscription on multiple devices

Access to the Online Archive dating back to August 2011



13 issues **delivered to your door**

Great savings on the shop price

Never miss an issue



**DIGITAL ONLY
SUBSCRIPTIONS
AVAILABLE
ONLINE...**

SUBSCRIBE TODAY

SUBSCRIBE SECURELY ONLINE



<http://hcc.secureorder.co.uk/HCC/V976>

* This digital discount is only available when you subscribe to the print + digital package. You can still get a great discount on the digital package, please visit the URL stated above for more information.
TERMS & CONDITIONS: Offer ends 27th October 2016. Please see www.homecinemachoice.com/terms for full terms & conditions.

**SAVE 74%
ON DIGITAL
SUBSCRIPTIONS***
Offer ends
27th October
2016

IN EVERY ISSUE
Kit reviews,
movies and TV,
accessories, installs,
insight, opinion,
competitions + more

CALL OUR ORDER LINE

0344 243 9023 (quote ref V976)

Lines open Mon - Fri - 8.00am - 8.00pm GMT & Sat - 9.30am - 3.30pm GMT

Calls are charged at the same rate as standard UK landlines and are included as part of any inclusive or free minutes allowances. Call charges vary depending on who your telephone provider is. Overseas calls will cost more.

DIRECT DEBIT SUBSCRIPTIONS UK ONLY

Yes, I would like to subscribe to Home Cinema Choice

☐ Print + Digital: £13.25 every 3 months

☐ Print: £10.99 every 3 months

YOUR DETAILS MUST BE COMPLETED

Mr/Mrs/Miss/Ms..... Initial..... Surname.....

Address

Postcode Country

Tel Mobile.....

Email D.O.B

I WOULD LIKE TO SEND A GIFT TO:

Mr/Mrs/Miss/Ms..... Initial..... Surname.....

Address

Postcode Country

INSTRUCTIONS TO YOUR BANK/BUILDING SOCIETY

Originator's reference 422562



Name of bank.....

Address of bank.....

..... Postcode

Account holder.....

Signature..... Date

Sort code Account number

Instructions to your bank or building society: Please pay MyTimeMedia Ltd. Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with MyTimeMedia Ltd and if so, details will be passed electronically to my bank/building society.

Reference Number (official use only)

Please note that banks and building societies may not accept Direct Debit instructions from some types of account.

CARD PAYMENTS & OVERSEAS

Yes, I would like to subscribe to Home Cinema Choice, for 1 year (13 issues) with a one-off payment

UK ONLY:

☐ Print + Digital: £56.00

☐ Print: £47.00

EUROPE & ROW:

☐ EU Print + Digital: £77.00

☐ EU Print: £68.00

☐ ROW Print + Digital: £77.00

☐ ROW Print: £68.00

PAYMENT DETAILS

☐ Postal Order/Cheque ☐ Visa/MasterCard ☐ Maestro

Please make cheques payable to MyTimeMedia Ltd and write code V976 on the back

Cardholder's name.....

Card no: (Maestro)

Valid from..... Expiry date..... Maestro issue no.....

Signature..... Date.....

Offer ends 27th October 2016. MyTimeMedia Ltd & Home Cinema Choice may contact you with information about our other products and services. If you DO NOT wish to be contacted by MyTimeMedia Ltd & Home Cinema Choice please tick here: ☐ Email ☐ Post ☐ Phone. If you DO NOT wish to be contacted by carefully chosen 3rd parties, please tick here: ☐ Post ☐ Phone. If you wish to be contacted by email by carefully chosen 3rd parties, please tick here: ☐ Email

**POST THIS FORM TO: HOME CINEMA CHOICE,
MY TIME MEDIA LTD, 3 QUEENSBRIDGE, THE LAKES,
NORTHAMPTON, NN4 7BF**

The big AV stories from IFA 2016

Berlin's annual technology expo opened its doors once again to showcase the latest innovations in home entertainment and smart living. **Steve May** and **Mark Craven** report on OLED TVs, 4K projectors, 11-channel AVRs and more

The Origin of the

OLED on the march as majors support the TV tech

IFA 2016 was a powerful promotion for OLED. While LG remains the flag-bearer for these next-generation TVs, the technology finally seems to have acquired allies. Joining LG at IFA was Loewe, with its Bild 7 and Bild 9 models, and Philips with its 55in Ambilight 55POS901F.

The Loewe Bild 7 proposition is nothing if not clever, thanks to a mechanism which drops the screen over the set's hugely powerful soundbar when not in use. The upmarket Bild 9, meanwhile, features a new stand and bezel construction from UK-based product design specialist Bodo Sperlein.

Philips' rival OLED is perhaps even more spectacular, featuring three-sided Ambilight and an integrated soundbar. As a consequence, it's rather thicker than the competition, but still looks smart. The picture quality, based on initial show demos, of both the Philips and Loewe sets is impressive.

Panasonic, however, managed to out-wow all challengers with a new flatpanel OLED prototype. This replacement for the curved TX-65CZ952B isn't ready for release yet, but image quality already looks staggeringly good, with vibrant colour, fabulous detail and bright HDR peaks.

More news on Panasonic's next-gen star is promised for CES 2017. Craig Cunningham, European TV product manager, told *HCC* that his engineers were beavering away to improve image quality beyond what's already expected. 'We know OLED

can deliver a perfect black, but currently our engineers are working on how to improve near blacks,' he teased. 'Our black box technologies can make a big difference here.'

LG itself didn't have anything new on display, although the OLED tunnel it constructed at the front of its IFA booth, using 215 of its 55in panels wrapped into a walkthrough half-cylinder, was nothing short of breathtaking, and continually rammed with gawping showgoers.

LG constructed an 'OLED tunnel' out of 215 of its panels



Philips' debut OLED takes centre-stage in its TV booth



Samsung wields Quantum Dots, wages war with OLED

OLED may have been the water-cooler hit of IFA, but not everyone was drinking the Kool-Aid. Samsung was adamant that Quantum Dot technology, as seen in its SUHD screens, is actually the future of TV. European VP of visual displays, Michael Zoeller, insisted: 'Light created with Quantum Dot is brighter, has better colour and is more power efficient.'

Zoeller's statement was agreed upon by Jason Hartlove, the CEO of QD technology maker Nanosys. 'We've tested Quantum Dots in extreme conditions, and found that after more than 30,000 hours, they look as good as the day they leave the factory. They can also be used from 2K to 8K, and in unlimited screen sizes.'

Similarly to LG, Samsung constructed a giant wall of QD screens, enticing attendees to stroll through and read a curated 'history of TV development' display, which naturally peaked with its own creation. Behind closed doors, the brand staged comparisons between its displays, OLED and conventional LCD models to qualify its picture performance claims, utilising some eye-catching visual science to explain the power of the nano-tech. It even managed to take pot shots at Dolby Vision HDR in the process; Samsung supports HDR 10 only on its panels, and its tech engineer team remarked that the nit levels, in particular, of Dolby Vision content make it an unfit partner for OLED.

The company also used IFA to officially launch a 10-year screen burn-in warranty for TV buyers. Samsung says screen burn remains a concern for consumers (who obviously harbour not-so-fond memories of plasma displays), but says its Quantum Dot TVs are immune. The campaign is a clear poke at LG and OLED, which as yet has to demonstrate its long-term resilience.

Bookshelf speakers in name only...

While Yamaha's IFA exhibit majored on its MusicCast multiroom products – including AVRs, soundbars and the nutty Disklavier piano – the most intriguing product was its NS-5000 speakers. Cheekily, these are described as Premium Bookshelf models, although their sheer size and weight would surely require a bookshelf of Brobdingnagian proportions.

Set to sell for around £13,000 a pair, the NS-5000s see Yamaha follow up its legendary NS-1000s from the 1970s. These left- and right-handed enclosures feature a three-way driver array, with a 12in woofer joined by a 3.15in midrange unit and 1in tweeter. The same material – Zylon, a high-spec polymer beloved of NASA – is used across all three drivers for improved timbre-matching. Frequency response is rated down to an impressive 26Hz.



Yamaha's new speakers ape the design of its older NS-1000s



Emphasising the colour reproduction talents of QD displays, with some visual aids

Visitors to Samsung's hall were greeted by a wall of SUHD TVs

After UHD and HDR comes HLG and HFR

Think your new 4K TV looks great? Well, you ain't seen nothing yet, if the tech demos at IFA were any indication. Broadcast technology is getting so advanced even the engineers making it are having a hard time keeping up.

Joining UHD and HDR in the industry's acronym-obsessed vernacular is HLG (Hybrid Log-Gamma) and HFR (High Frame Rate). Hybrid Log-Gamma, a joint development between the BBC and Japanese state broadcaster NHK, is a new 'display independent' standard expected to be ratified as part of the DVB broadcasting specification before the end of the year. It enables broadcasters to transmit HDR content to HDR TVs, yet maintain support for everyday (SDR) screens by eschewing metadata in favour of a clever logarithmic and gamma curve mashup (hence the name), thereby saving valuable bandwidth and keeping workflow and infrastructure manageable. As yet there's no official roadmap for the technology, but expect it to develop into a big deal in a couple of years.

At IFA, for the first time, LG was demonstrating Hybrid Log-Gamma HDR running at high frame rates, specifically 100 and 120fps. There are no TVs commercially available that can display such HFR HDR content, and no plans to broadcast it – but it certainly looked silky smooth. With fast-moving sports action lensed at this year's French Open tennis championship, beautiful detail was retained with none of the video soap opera effect commonly associated with today's interpolating sets.

LG wasn't the only display marque demonstrating HLG. Samsung had screens and pledged that all its 2016 HDR TVs would be firmware upgradable to work with it, while Panasonic offered demonstrations from Sky Deutschland – so expect similar from Sky UK in due course.

Sony, meanwhile, announced its first compatible projector. The VPL-VW550ES, the third 4K HDR model in Sony's SXR portfolio (featuring a claimed 1,800 Lumens light output, 350,000:1 contrast ratio and HDCP 2.2-ready HDMI inputs) will be HLG-enabled via a firmware tweak. The PJ is expected to sell for around £9,000.



Panasonic was the biggest promoter of 4K Blu-ray at IFA



Below: a side-by-side Hybrid Log-Gamma and SDR comparison



Panasonic lowers its sights on 4K Blu-ray

If you've been contemplating jumping the UHD Blu-ray bandwagon, IFA brought good news with Panasonic expanding its player lineup with the DMP-UB700. Priced at £400 and available around the end of October, this aims to maintain the picture performance chops of the DMP-UB900 while being significantly cheaper.

According to chief engineer Kazuhiko Kouno, the key differences include the power supply, less fancy audio components and a basic remote control. However, there's still support for Netflix and Amazon Video, and the UB900's 4K High-Precision chroma processor and upscaling functionality are onboard. The chassis design is very similar, and while not an audiophile offering, the player is compatible with Hi-Res Audio music files, including DSD (5.6MHz/2.8MHz), FLAC and ALAC, and has those groovy analogue-sounding Digital Tube Sound presets with 192kHz up-sampling.

As for other 4K Blu-ray launches, IFA was something of a disappointment. LG and Pioneer remain out of the picture, and Samsung refused to follow up last year's unveil of its UBD-K8500 with a sequel. A Philips spokesman, meanwhile, confirmed to HCC that its BDP7501 UHD deck, currently on sale in the US, will not be appearing in UK shops.

Sony did, however, tease with a prototype 4K deck squirrelled away on its booth with little fanfare. This sported a chassis clearly borrowed from its UHP-H1 Blu-ray spinner, but offered no name, feature set or price tag. However, in the weeks after IFA, the company confirmed the player as the UBP-X1000ES, due for release in Spring 2017 but 'offered exclusively to the custom installer channel'. Format support includes SACD and DSD up to 11.2MHz.

Emit. Enter the World of High-End Performance.



The new Dynaudio Emit series is the latest model range from Dynaudio and was conceived as an entry level high end loudspeaker series incorporating extraordinary levels of performance and technical innovation in an attractive package suitable for almost any level of home cinema amplification.

Visit www.dynaudio.com to find your nearest authorised Dynaudio retailer.



Listen to the new Emit Series.

DYNAUDIO



JVC 4K PJ turns us Blue with envy

Upon arrival at IFA, HCC made a beeline for JVC's booth to get first impressions of its native 4K laser projector, which was making its global debut. And it definitely wasn't a wasted visit.

Within a blacked out '4K Kino' demo room, the PJ specialist provided half-hour taster sessions of its new flagship, which was confirmed as being called the DLA-Z1. It's a sizable model too, measuring 72cm long and 50cm wide. Connections, as expected, include 2 x HDMI inputs (both HDCP 2.2-enabled), 12V trigger, RS232 and Ethernet ports for automated control and JVC's usual 3D sync emitter jack.

Unlike the brand's existing eShift models, the DLA-Z1 offers a native resolution of 4,096 x 2,160 and boasts THX 4K Display certification. Yet this resolution skill is just one part of the story. Gone is the traditional lamp and in comes a 'BLUEscent' laser engine which claims to deliver a 3,000 Lumens brightness output and a 20,000-hour lifespan.

So, how does it perform? Masterfully. Running through a few 4K HDR demonstration reels and then an extended sequence from Luc Besson actioner *Lucy* on 4K Blu-ray, the Z1 was jaw-on-the-floor good.

With natural landscapes, aerial city views and the traditional fireworks shows beloved of HDR content makers, the JVC exhibited fine colour handling. Sky- and sea-blues, and the various greens of a rainforest, were bright and nuanced – the PJ claims full support of the DCI P3 colour space and 80 per cent of REC.2020. Whizzing explosions against a night sky denoted excellent light handling; the fine details of a cascading waterfall and concrete buildings invited close inspection.

And with *Lucy*, the DLA-Z1 simply left us wanting to watch the whole movie. The PJ is capable of a wonderfully natural image reproduction that draws you into the onscreen drama and pushes the technology creating it into the background. It helped, of course, that running with the JVC was a premium Quadral Aurum speaker system. This was a true home cinema demo.

The bad news for AV-Holics is that the DLA-Z1 (which will support both HDR 10 and HLG) will hit stores with a £30,000 price tag...

Got £30,000 burning a hole in your pocket? Consider JVC's DLA-Z1 projector

Sony goes gizmo crazy

Sony's biggest IFA announcement was its Signature line of High-Res Audio branded personal audio components. Celebrating the company's 70th anniversary, we got to listen to a luxury headphone amp, the €2,000 TA-ZH1ES, two premium Walkman models, the gold-plated €3,300 NW-WM1Z and €1,200 NW-WM1A, and high-end MDR-Z1R headphones (€2,200). With a large 70mm HD driver unit, ergonomic leather earpads and lightweight titanium headband, these cans sound quite astonishing, with superb definition and a real bass kick.

Sony also touted the MDR-1000X, a new Bluetooth noise-cancelling headphone with fancy control functionality, that will sell for a more palatable £330 from October.

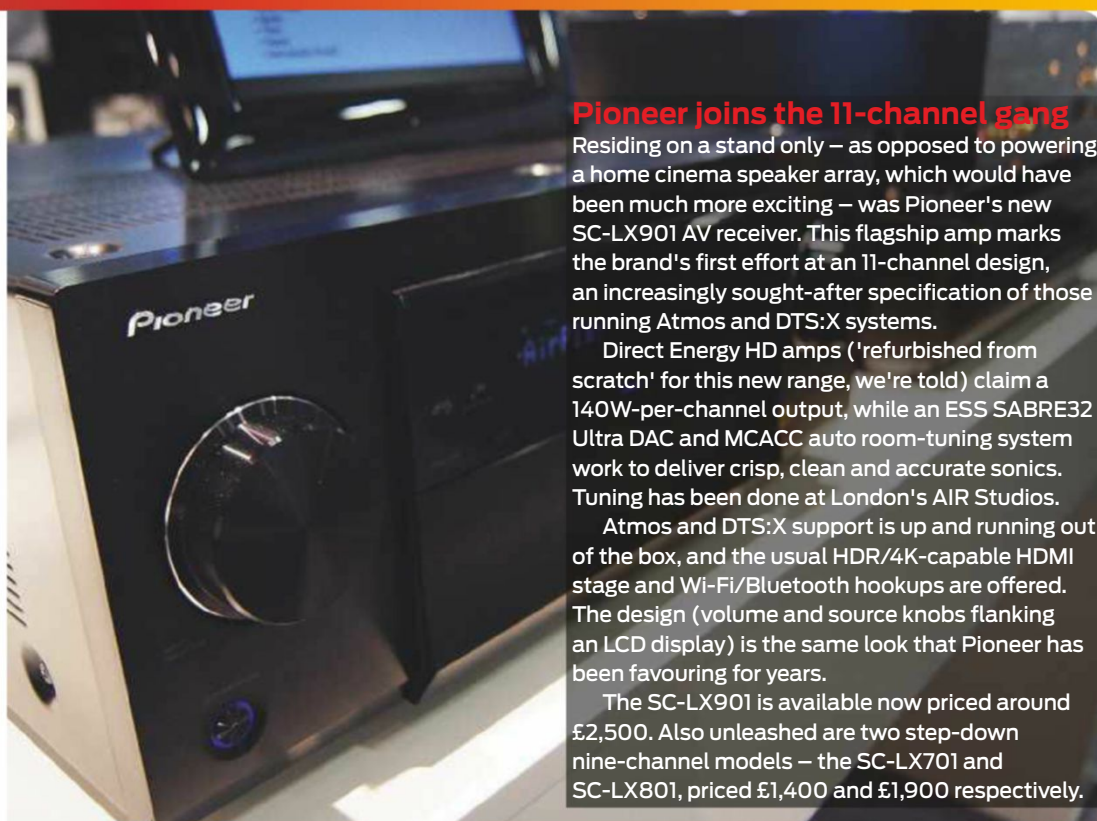
Continuing the smallscale electronic theme, the big S also pushed two more models of its Life Space UX range, confirming availability in the UK. Adopting a 'keep it simple' naming scheme, the Glass Sound Speaker (£800) mounts an LED within its glass cylinder to match music with soothing illumination. Battery operated, it supports Bluetooth connection. Perhaps the sort of speaker to impress at dinner parties.

Also coming to the UK is the £1,000 Portable Ultra Short Throw Projector, which fires laser-illuminated 80in 720p HD images onto your wall from its cutesy 10cm cube. Presets in the app control include the ability to project time, weather, etc updates; Blu-ray decks and media players can plug in via HDMI.



**Right: Sony's ultra short throw projector
Below: A Sony rep takes the Glass Sound Speaker for a tour of the booth**





Pioneer joins the 11-channel gang

Residing on a stand only – as opposed to powering a home cinema speaker array, which would have been much more exciting – was Pioneer's new SC-LX901 AV receiver. This flagship amp marks the brand's first effort at an 11-channel design, an increasingly sought-after specification of those running Atmos and DTS:X systems.

Direct Energy HD amps ('refurbished from scratch' for this new range, we're told) claim a 140W-per-channel output, while an ESS SABRE32 Ultra DAC and MCACC auto room-tuning system work to deliver crisp, clean and accurate sonics. Tuning has been done at London's AIR Studios.

Atmos and DTS:X support is up and running out of the box, and the usual HDR/4K-capable HDMI stage and Wi-Fi/Bluetooth hookups are offered. The design (volume and source knobs flanking an LCD display) is the same look that Pioneer has been favouring for years.

The SC-LX901 is available now priced around £2,500. Also unleashed are two step-down nine-channel models – the SC-LX701 and SC-LX801, priced £1,400 and £1,900 respectively.

8K looming, but no news yet

With all the excitement about 4K HDR and developing broadcast specs, there wasn't much new to be said about 8K at IFA 2016, despite the clock ticking on Japan's planned Tokyo 2020 Olympics showcase for the pixel-pushing format.

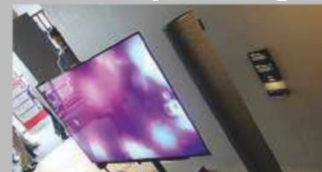
Chinese panel vendors seemed particularly keen to be seen able to make these forward-looking panels, but no one really had much of a realistic roadmap. Hisense offered a 110in 8K ULED which looked spectacular, while similar large screens less likely to see UK daylight could be found from less familiar makers elsewhere, including Changhong and Grundig. Currently best file 8K under 'Pending'... ■



News in brief

The best of the rest from the IFA technology show

Loewe drops a Klinger



At IFA it became apparent that Loewe has decided to rename all its high-end speaker systems Klang. Klang in German means sound, but for the rest of us it's nothing less than onomatopoeic comedy gold.

Hisense loves laser

The Chinese TV giant was showing off its Laser Cast TV – actually a 4K-resolution ultra short throw projector with HDR support. It can craft a 100in image from a 53cm throw. Due to go on sale next Spring, price still TBA.

'Katch!' shouts DALI



DALI has been convincing with its speaker arrays and soundbar, so news that it is entering the portable Bluetooth speaker market pricked our ears. The £330 Katch (offered in a choice of colours) features a four-driver stereo array, rechargeable internal battery and eye-catching aluminium chassis.

Virtual Reality isn't going away

Not ready to don a VR headset for your AV thrills? You may be off-trend, as IFA provided further proof that manufacturers see up-close-and-personal entertainment as a major market. Walking the cavernous halls of the Messe Berlin it was almost impossible not to bump into someone waving their arms around, wearing a VR headset...

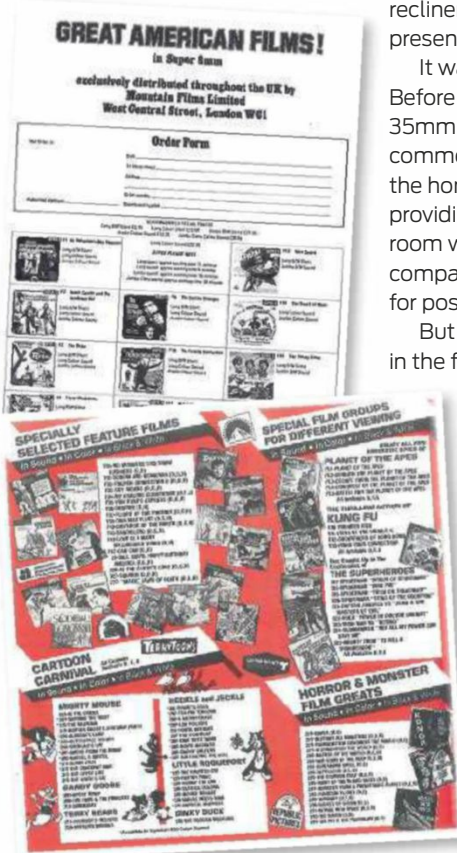
There were plenty of 8K TVs on show, but no price tags or release dates

WHEN HOME CINEMA WAS...

SUPER

Domestic projection reached a mainstream audience with the birth of Super 8mm film in the 1960s. **Martin Dew** remembers the days of Eumig projectors and highlight reels, and discovers it might be readying for a comeback...

The Super 8 boom saw collectors buying titles via mail order catalogues



WE TYPICALLY THINK that home cinema entered public consciousness with Blu-ray in the noughties, DVD in the nineties, or VHS in the eighties. However, owning and operating a personal screening room goes back a lot further. Well-heeled AV heads – think Hollywood moguls and glitterati – have been hunkering down in darkened rooms, adjusting comfy recliners, and kicking back for that special feature presentation since the early 20th century.

It was hardly a mainstream hobby, though. Before the first World War, hefty and expensive 35mm reel-to-reel projectors (as found in commercial cinemas) performed video duties in the home. The huge capital outlay for equipment providing such luxury meant the home screening room was a rare beast. Subsequently other more compact and manageable film formats jockeyed for position for home cinema supremacy.

But by the mid-1960s a revolution took place in the form of Super 8mm film. What had generally been the preserve of the wealthy – listening to the clatter of the turning sprocket wheels of a film projector, and beaming a catalogue favourite movie onto a living room wall – was a joy that the masses could now embrace. The worldwide leading manufacturer of Super 8mm projectors, Eumig of Austria, was producing over half a million such models a year by 1976, while punters increasingly reaped the rewards of a bigscreen experience to take on the underwhelming output of their small tellies. Collecting Super 8 films became an obsession for thousands of film devotees before the VHS era took hold.

For some enthusiasts, the magic of projected celluloid still hangs on to this day, similar to the audiophile passion for vinyl. And could we see a Super 8 renaissance of the type that vinyl has experienced? A couple of years ago it would have seemed unlikely, but Kodak rocked up to 2016's CES technology expo to showcase a new Super 8 camera that marries modern-day features (USB charging, 3.5in LCD swivel-mounted viewfinder) with recording to 50ft 8mm film reels. As part of its wider Super 8 Revival Initiative, the cam remains un-launched as yet, but Kodak earned approval from creative talents: 'While any technology that allows for visual storytelling must be embraced, nothing beats film,' said (director of sci-fi *Super 8*) J.J. Abrams. 'The fact that Kodak is building a brand-new Super 8 camera is a dream come true.'

Getting En-gauged

The driving force for film projectors in the home was not only film collecting, but movie-making itself. The market for film formats less cumbersome than professional 35mm goes back to 1923 when Eastman Kodak introduced its 'amateur' stock: 16mm. Billed as a budget alternative for keen makers of silent films, the company touted its first outfit, consisting of camera, projector, tripod, screen and splicer, which could be snapped up for \$335 (around \$4,700 in today's money).

The acetate base of 16mm film, as distinct from 35mm's flammable nitrate base, made this new gauge appealing to household users. The ability to rent and buy commercial films from the Kodascope Library was a further boon. In 1935, optical soundtracks became available on 16mm stock, and amateur filmmakers, documentarians and news stations continued to adopt the format right up until the 1990s.

Another rather quirky film gauge (9.5mm) arrived on the scene in the early 1920s, this time from French powerhouse Pathé Frères. Introduced primarily for collectors of commercial movie titles, it did also gain favour with amateur content creators. Its slightly



clunky single central sprocket hole mechanism made it a bit prone to print damage, though, and the arrival of Standard 8mm film in 1932 saw its appeal wane.

Also known as 'Regular 8', Eastman Kodak's Standard 8mm film used side-mounted sprocket holes, identical in size to those on 16mm prints. Modified 16mm stock formed the basis of spools inserted into a Standard 8 camera, which needed removing and turning over mid-filming to render images down both sides of the exposable area. Major studios began to release what became known as 'package movies' for collectors, but few were more than 200ft in length (about 8 minutes), and Standard 8 projectors with sound were rare.

Enter Super 8, Eastman Kodak's brilliant 1965 innovation which transformed the entire home movie industry. Smaller sprocket holes than Standard 8 allowed for a larger exposed picture area, and oxide stripes on both edges of the stock provided the means by which to record sound during image capture, or later during the editing process at home. Fujifilm, meanwhile, introduced its competing format known as 'Single-8'. This Japanese challenger deployed a polyester (rather than acetate) film base, and its cartridge loading system required the use of proprietary licensed cameras for shooting, even though the final developed film would run fine in a Super 8 projector.

By the 1970s, Super 8 projectors at a variety of price points, and with a head-swirling range of feature sets, could be purchased from camera stores across the UK, with the bulk of the manufacturers hailing from Austria (Eumig), Germany (Bauer) and Japan (Elmo, Sankyo, Chinon), while Bell & Howell from the United States was also a major player. By the end of the decade, anamorphic lenses were

Super 8 releases from US major studios continued well into the 1980s

available for CinemaScope presentations of commercial releases, while two-channel stereo and Dolby Stereo exploited both magnetic sound stripes (the second designed originally for ballast as the film ran through the PJ).

Package deals

The thrill of Super 8 was the wide selection of films available to collectors. Prior to the onset of commercial VHS tapes, there were literally thousands of film titles ready for purchase by mail order, or at retail stores peppered across the UK. And long before we saw the jottings of our own Mr. van Beek, home cinema geeks could drool over endless reviews by Bill Davison in his regular 'Bootlace Cinema' article in the *Movie Maker* monthly magazine.

The most popular package movies were the 17-minute highlight reels (mounted on 400ft spools) of major titles, which the Hollywood studios

released directly. A highlight reel would include a usually skilful edit of an entire feature film with beginning, middle and end intact, and usually cost £30 for a recent release. In 2016, it's a hard concept to get your

head around, but consumers lapped them up.

Want to relive the best bits from Steven Spielberg's *Jaws* or Ridley Scott's *Alien* whenever you desired? Now you could.

And Super 8 didn't die as soon as VHS appeared. Rather, as the VHS juggernaut advanced, Warner Bros., Fox, Disney and Columbia presented their celluloid titles in ever more alluring packaging.

'The real thrill of Super 8 was the wide selection of films available, including the highlight reels of major titles'

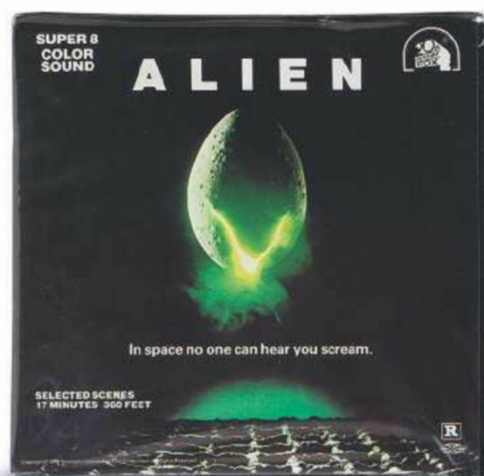
Spin the wheel

Eumig's Mark S 807
– a Super 8 superhero



Martin Dew's Super 8 projector is a Eumig S 807, which has a 1.6/17-30mm zoom lens, 100W tungsten-halogen lamp, and plays back Super 8 and Single 8 monaural sound film, with speed options of 18 and 24 frames per second, and 600ft (around 30 mins) spool capacity. With both forward and reverse projection available, it also includes an auto-load function (reel-to-reel), a built-in 6W speaker (with an extension speaker jack), and record/mixing capabilities for adding dialogue, music and effects to soundtracks. The concurrently available S 807D was identical except that it was a 'dual' gauge projector, enabling it to play back Standard 8mm films too (with a nifty set of replacement sprocket wheels). Accessories in the box for both the S 807 and S 807D included a film trimmer, spare fuse, recording microphone and 20ft of striped Super 8 film for recording and testing.

Fancy watching only the best bits
of Hollywood blockbusters?
With Super 8 you could



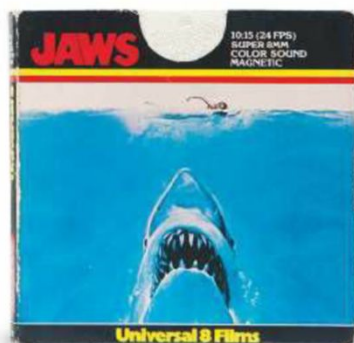
Kodak unveiled a
new Super 8 cam
at CES 2016

while Universal Pictures' Universal 8 distribution arm pushed out a series of beautifully-transferred reels from its archive, housed in rugged injection-molded casings, and which included Alfred Hitchcock's *Psycho* and *The Birds*, disaster movies, and legacy horror.

Super 8 catered for all tastes, from the latest tent-pole Hollywood offerings to Harold Lloyd silent capers. Paramount Pictures even released full-length feature films on 6 or 7 x 400ft reels, including *Grease*, *Saturday Night Fever* and *Marathon Man*, while Dudley-based Derann Film Services specialised in full-length British greats from the Hammer vaults and Ealing Studios. Walton Sound and Film Services in London also provided a host of abridged and feature prints, mostly gleaned from the Rank catalogue. Price tags were usually north of £200 for a modern feature, so film collecting at that level was never a game for the faint-hearted.

Fade in

Not everything is perfect about film. Colours fade over time, prints get scratched, the projectors are all noisy (and should be in a booth), and putting on a movie show is hard work.



But if you're even remotely repelled on occasion by the clinical sterility of your *Transformers* Blu-ray collection, then you might just be in the market for a film projector. The act of watching film in the home is utterly unique.

The hobby took a significant nosedive in the early 1990s before DVD arrived. That enthusiasts sat through demos of VHS tapes and LaserDiscs feeding £30,000 line-doubled and -quadrupled Barco CRT projectors, pretending they looked good while smiling politely, is extraordinary, particularly given that only ten years previously they'd thrown most 8mm and 16mm projectors in the bin.

I'd go as far to suggest no home cinema is utterly complete without a Super 8 or 16mm machine to sit alongside your Epson or JVC. Therefore, it's worth checking to see if older relatives have a film projector and selection of movies in their loft. A lot of these gadgets are still in existence. If you're not getting any joy on that front, then check out the usual second-hand suspects online, or trundle over to the likes of Classic Home Cinema in Cleethorpes, where proprietor Philip Sheard, retailer of used film, projectors, and related paraphernalia, might just help you discover a world of untapped euphoria.

Why bother? Because this is about the romanticism of a bygone age, about being willingly hypnotized by the mechanics of a persistent turning feeder reel and take-up spool. For those old enough, it might bring up memories of watching B-movie double bills; all those things of which Quentin Tarantino was reminding us of in *Grindhouse*. It's an experience about analogue warmth and coziness, a gently meandering weave as the film passes through the gate, the sumptuous contrast and depth of field, and picture grain so dense you can bathe in it. The greatest AV travesty of the past 30 years has been the slow, miserable decline of film. You could play a part in keeping it alive! ■

DENON®



EXCEPTIONAL PERFORMANCE.

The new **Denon X-Series** – Each network AV Receiver comes with the latest future-ready features, best-in-class user interface and further refined Denon sound. All adding up to an exceptional performance for the demanding audio and video lover.

Fully loaded with the very latest audio and video technologies, the **AVR-X2300W** delivers incredibly immersive surround sound, optimised via extensive sound tuning – not to mention plenty of amplifier power.

www.denon.co.uk



AVR-X2300W



SKY Q 4K

what you need to know

The satcaster has launched the UK's most comprehensive 4K broadcast service. **Steve May** and **Mark Craven** talk you through the tech, the content and, yes, the price tag...



Sky will broadcast over 120 Premier League games in 4K this season

You'll need a Sky Q box – and only one will do

As Sky's regular Sky+HD platform doesn't offer Ultra HD video resolution output, it should be obvious that to view the new 4K content, you need to upgrade to the Sky Q platform. However, across that range, only one of the set-top boxes will get you watching 4K footy, movies *et al*: the 2TB Sky Q Silver PVR. Perhaps confusingly, the 1TB Silver hardware doesn't support 4K content. Furthermore, although multiroom/device viewing is very much part of the Sky Q ethos, with 4K it's a one-screen affair – UHD material cannot be streamed to Mini boxes for viewing on other 4K screens, not least because the Minis aren't 4K-enabled either.

There's no premium charge, but...

Unlike, say, Netflix, Sky doesn't charge extra to view its 4K broadcasts and downloads; all such content is made available provided you have the relevant

subscription (e.g. a Sky Sports sub to view 4K sport). However, as a 2TB Silver PVR is a required part of the process, pricing isn't for the faint-hearted. Getting that box (plus a bundled second-room Mini) costs around £54 per month. On top of this, you'll probably want to add subscriptions for Sky Cinema (£18p/m) or Sky Sports (£27.50p/m), or both (in which case there's a discount). All told, your 4K content fix could cost around £80 a month, for a minimum 12-month contract, and that excludes the cost of broadband.

You'll need to adjust your settings

Sky's Silver didn't support Ultra HD output at launch, but an update (enabled in advance of the 4K debut) flicked the switch. This allows you to adjust the box's output settings – something you need to do to watch 4K (if you try to access a 4K broadcast or stream you'll be prompted to make the change).

In the Setting/Setup/Audio Visual menu, you can switch from 1080p to 2,160p (denoted by a UHD

logo). You'll get an alert window if the box isn't connected to an HDCP 2.2-enabled HDMI input, and warned that if your TV doesn't support 10-bit colour, that it will be output at 8-bit.

Doing this means, of course, that your Sky box is upscaling all HD (and SD) content to 2,160p, thus making everything output require HDCP 2.2 authentication and taking your display's own upscaling engine out of the equation. Depending on the prowess of your telly, this may not be ideal; we've found on various models (Samsung, Panasonic and Sony sets) that switching the Sky box's output can lead to a softer image with non-4K material, something that is most noticeable with the EPG. You may find the best solution is to only adjust the output when you're watching 4K content – which is where Sky Q's prompt comes in handy.

HDR isn't on the menu... yet

While Ultra HD Blu-ray owners will have quickly grown used to HDR presentations of their favourite (and not so favourite) movies, and some industry surveys have found viewers prefer HDR 1080p video to standard dynamic range 2,160p, Sky's Ultra HD service is currently broadcast in traditional SDR.

Regards HDR, the broadcaster is understandably keeping its plans close to its corporate chest. We'll doubtless learn more when Hybrid Log-Gamma HDR becomes a standardised element of the DVB specification – HLG allows broadcasters to deliver a single bitstream to both 4K HDR screens and standard dynamic range sets. Streamers like Amazon Video and Netflix have to provide multiple deliverables, depending on the receiver (a Dolby Vision LG TV gets one stream, while an HDR 10 Samsung TV, for example, gets another). HLG simplifies all that.

As a consequence, early 4K content on Sky is colour graded to REC.709. When Sky requires an HDR grade, it's asking producers to comply with BT.2020 and SMPTE ST2084 standards.

When it comes to 4K creation, Sky has its own rules to be followed

Sky has strict technical requirements for UHD production, and offers extensive guidelines for commissions. Programmes that don't meet these can be rejected or refused UHD qualification. Let's look at some of the minutia...

Regulations start with camera sensor size. These should be at least 1-inch, probably 16 mega-pixels, able to output equal to or exceeding 3,840 x 2,160, which conforms to UHD Tier 1 of the EBU R118 specification for hi-def cameras, or Tier 2, which covers cameras that equate to 35mm film.

There's been a lot of debate about colour subsampling over the past 12 months or so – not least because 4K Blu-ray is delivered at 4:2:0. Sky specifies a minimum of 4:2:2 from its suppliers, but says it prefers 4:4:4. It also specifies an AVC-Intra-based compression format at no less than 500Mbps for 2,160p/50 and 250Mbps for 2,160/25.

Sky recently moved Sky Cinema to AVC-Intra encodes, resulting in a significant picture improvement for HD content.

'Remastered for UHD'? Don't worry

The actual definition of 4K UHD can be elusive, as it covers a multiple of sins. Subscribers to Sky Q's Ultra HD service will have noticed that some content carries the qualification 'Remastered for UHD' – but what does this actually mean?

Sky itself defines native UHD as content recorded on cameras at least meeting the EBU requirements above. Resolution has to be retained through post-production.

Qualifying film scans is a little trickier, as definition can be influenced by film stock, film speed and even condition from storage. Any restoration work can also influence whether a scan can be legitimately classified UHD.

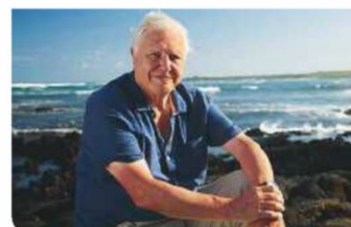
Things become more interesting when we get to that 'remastered' caveat. This does not mean you're watching some sort of sleight-of-hand upscale. It generally means Sky has returned to the original assets to produce something better than HD. Original content needs to be 10-bit or greater and shot at better than 2K resolution. Over the past decade there are plenty of movies which have been shot on cameras with better than 2K resolution but which don't capture at 3,840 x 2,160 or greater.

There are exceptions to all this small print, of course. Some UHD content may include footage shot on action cams or GoPros for expediency or access, while visual effects are acknowledged to be rendered at 2K resolution. Neither of these invalidate a UHD qualification. It's all about context.

Some 4K content comes via satellite, some via broadband

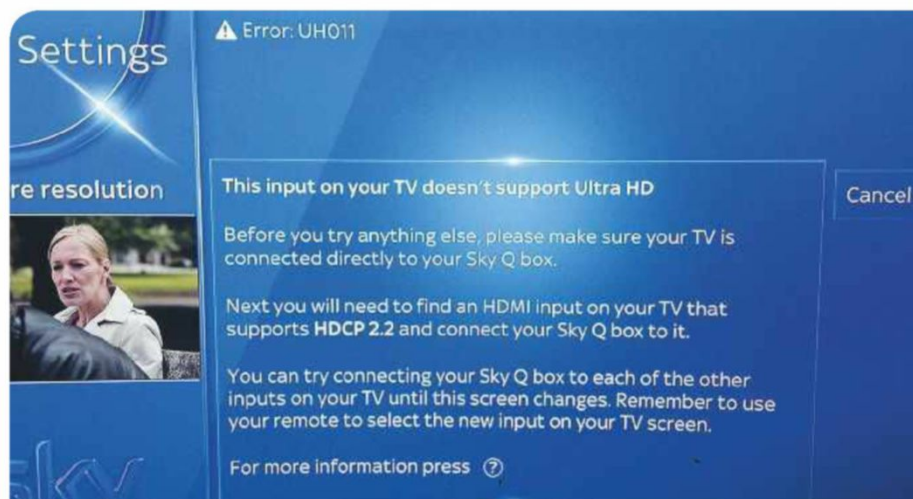
Sky serves Ultra HD programming to its subscribers in two different ways. Currently, it's only live sports coverage that is sent via satellite in a simulcast. Choose to watch a game where a 4K broadcast is available and an onscreen prompt will let you know it's there. Similarly, you can select to record the UHD version when accessing from the EPG.

All other material (documentaries, TV dramas, movies, music showcases, etc) is provided on-demand. As has long been the case with Sky, however, content isn't streaming in real-time, but downloaded to the Sky Q box over your 'net connection to watch, thus avoiding buffering issues. ➤



4K content includes dramas such as *The Blacklist* and nature docs including David Attenborough's *Galápagos*

Try to view through a non-HDCP 2.2 input and you'll get this error message



Boxset bug

It's not all good news for binge-watchers...

There are, of course, UHD bugs still to iron out. One of the most infuriating is with boxsets. Sky has a number of TV collections in its UHD locker which beg to be wolfed. One cool feature of the Sky Q platform is that when you get near to the end of an episode, the box automatically segues to the next helping. It's a trick nicked off Netflix. However, choose to watch a UHD episode of *The Blacklist*, and when you get to the end Sky queues up and plays the next episode... in HD. For some reason, the system isn't smart enough to line up UHD. You have to exit from the show and manually select your next 4K helping. This can make binge-watching in UHD a bit of a bore.



The Godfather is one of Sky Cinema's back-catalogue 4K titles

Naturally, UHD material takes up more HDD space. The 2TB capacity of the Sky Q Silver comes into its own here, as a three-hour live football broadcast will take up around 60GB; a two-hour movie (*Everest*, for instance) needs around 16GB.

4K football looks fantastic

Football coverage has long been a major selling point for Sky, so it's no surprise to see a barrage of Premier League games being offered in 4K. The good news is that this content really sells the benefits of Ultra HD resolution, providing a clear, obvious step-up over the HD transmissions. Detail levels are remarkable, particularly when it comes to the thousands of fans in the packed stands and the expansive green pitches.

Motion – always an issue with football, especially the ball – holds up well at 2,160p50. Combined with some super-sharp onscreen graphics and a good range of shots, including close-ups, it's an excellent all-round package.

The movies don't look bad either...

So how does Sky UHD compare to 4K Blu-ray? Currently there's little available on Sky Q's UHD platform that's also available as a 4K Blu-ray, but the Matt Damon Red Planet yarn *The Martian* is available to provide an interesting comparison. The good news is that the UHD Sky download is visually every bit the match for the 4K disc – and at times arguably looks a tad sharper and cleaner. What differences there are largely come down to colour grading and the absence of HDR. In terms of pixel clarity, there's no cause for concern.

Of course, not all 4K content looks the same. There are back-catalogue movies available, such as *The Godfather*, that are unlikely to be included as part of a 4K showcase. Yet what's important is that this routinely dark and grainy gangster drama retains its filmic look and appears pleasingly sharp.

As for audio, Sky asks studios to supply the same mix that's found on a commercial disc release. This is usually a near-field mix – an area of some contention with cinephiles, as near-field mixes may not sound anything like those heard in cinemas (the near-field audio mix of



There are 4K flicks available via the Sky Store, too

Avengers: Age of Ultron, as used on the Blu-ray, is one notorious example). The broadcaster could be missing a trick here by not making theatrical multichannel mixes the standard – it's probably not practical, but this would give the satcaster a unique advantage over rival content sources.

There are movies, and more movies

With no all-encompassing Ultra HD tab to guide you towards 4K fare, locating available material can sometimes turn into a bit of a hunt. For movie fans, it's important to know that there's another selection of PPV titles (priced £3.50) in the Sky Store to join those found amongst the Sky Cinema selection. Oddly, though, these are only searchable if you access Sky Store direct from the EPG, and not if you access it from the tab within Sky Cinema. Try this way, and the Ultra HD option is missing...

It's not the only Ultra HD content around – check out BT, Netflix, Amazon and more

Sky certainly has a diverse Ultra HD catalogue, but any AV-Holic looking for the widest 4K experience shouldn't limit themselves to the satellite platform.

Most obviously, there are the two 4K streaming services from Netflix and Amazon. The former, for £8.99 a month, delivers a good range of UHD material, including the *Daredevil* and *Jessica Jones* Marvel series, crime drama *Narcos* and a smattering of Netflix Original movies (such as the sequel *Crouching Tiger, Hidden Dragon: Sword of Destiny*). Some content is also offered in HDR (including in Dolby Vision if you've a compatible – read, LG – TV). Amazon Video, meanwhile, is included with a £79-per-year Prime subscription. Again, some HDR content is there to stream, and the content selection includes a healthier range of movies from Hollywood studios.

When it comes to UK TV, telecomms giant BT beat Sky to the 4K post by launching its Ultra HD Sport channel last Summer, delivered via broadband to a compatible set-top box. As with Sky's coverage, this looks fantastic. It's currently offering two football games a week (one from the Premier League, the other from the National League), plus Aviva Premiership rugby.

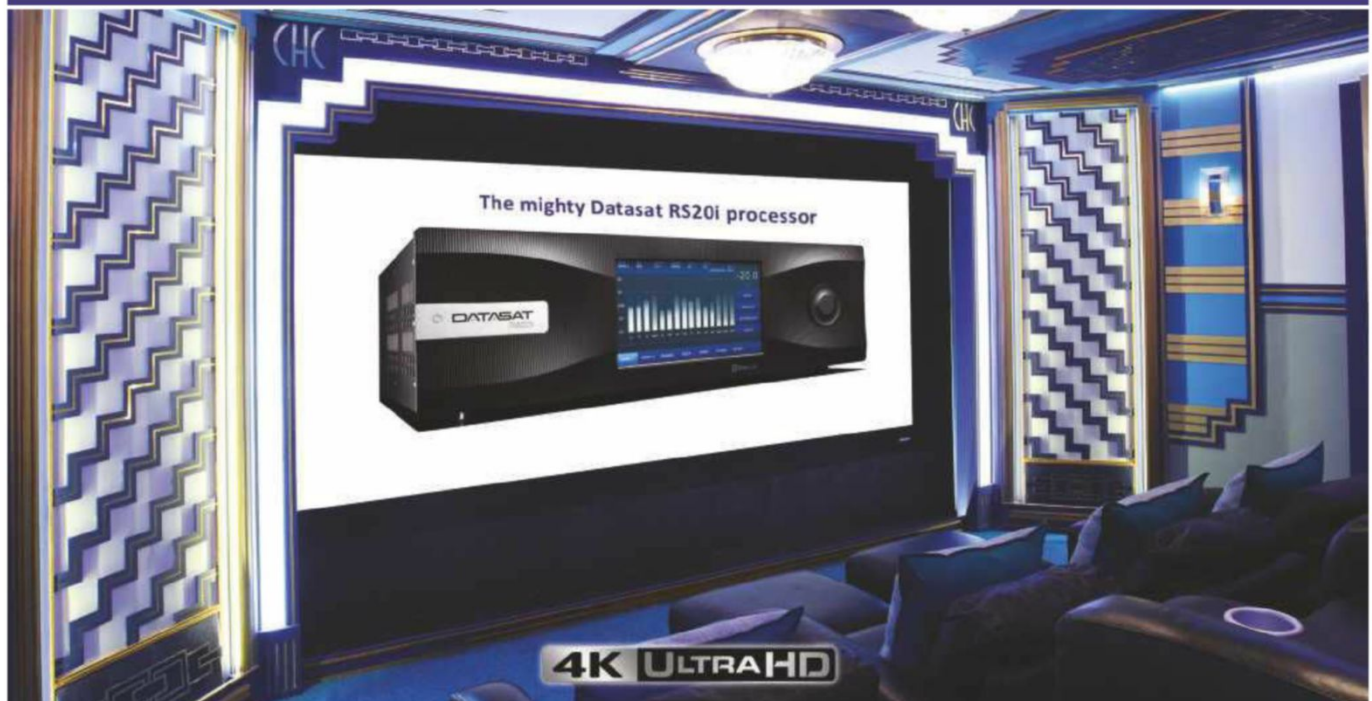
Still want more 4K? Well, there's a variety of vids available on YouTube, plus an uninspiring selection of movies on the PPV Wuaki.TV service. Oh, and don't forget Ultra HD Blu-ray... ■

BT provides a rival Ultra HD sport channel using Humax hardware



CITY HOME CINEMAS

SOUNDS INCREDIBLE



Would you really like to know what a director would like you to see and hear...
Then look no further.

Come and experience this authentic sound from **Datasat** and **Wisdom**. You will be stunned...

We've teamed Datasat's professional sound solution the RS20i, with Wisdom's advanced architectural line source, in-wall speakers to create a true-to-source sound, just as the director intended.

These speakers you won't see, but the RS20i will make damn sure you'll hear them, perfectly.

Our unique Art Deco Moderne cinema is the only fully 4K equipped showroom in the U.K.

Demonstrations by appointment only, please call.



BRINGING TRUE CINEMA TO YOUR HOME



Movie room makeover

You buy a house with its own basement home cinema, but decide you want it upgraded...

CINEMA ROOM KITLIST

SONY: VPL-VW500ES 4K Ultra HD projector

SCREEN RESEARCH: 2.8m Supreme3 fixed-frame projector screen (16:9) with 4K acoustically transparent material

FORTRESS: 9 x Matinee cinema seats

VELODYNE: 2 x SPL800 Ultra subwoofers

TOTEM ACOUSTICS: 7 x Tribe 1 on-wall speakers

YAMAHA: RX-A3040 nine-channel AV receiver

OPPO: BDP-103D universal Blu-ray player (multi-region/multi-zone)

SKY: Sky+HD set-top box

WYRESTORM: WYR-EX-40 HDMI extender

RTI: System control hardware and LED touchscreen remote control

LUTRON: Grafik Eye QS controller for six lighting circuits



A FINALIST IN this year's CEDIA Awards in the home cinema £40,000-£100,000 category, this below-stairs theatre saw installer Finite Solutions given a somewhat unusual brief. The owners had recently moved into the house, and one reason for choosing it was that it came with its own cinema room. Yet, while happy with the performance, researching the world of personal AV playrooms led them to realise they could make it even better, and have it re-styled to their own tastes.

Perhaps inevitably, after consultations, 3D renders and product demonstrations, the install project turned from one of revamp into overhaul. When building commenced, the existing cinema was taken back to a bare shell.

Once finished, the space had been dressed in a cool black-and-grey colour scheme, with bespoke acoustic room treatments, hidden storage, three rows of seating, 4K projection, a discreet 7.2-channel sound array and smart lighting and system control. Even the staircase down to the room had been redesigned and reinstalled. A bit more adventurous than an episode of *Changing Rooms*...

A. The dark art of acoustics

The 7.2-channel speaker system is given a helping hand by wall-mounted absorption and diffusion panels. These are black, as are the speakers, to blend with the 'holographic' wallpaper and focus attention on the projector screen and nothing else. Subwoofers, located in the bespoke joinery, are mounted on SubDude anti-resonance platforms

B. When two becomes one

The combination of a 2.8m projector screen and a Sony Ultra HD PJ means the room is fit for purpose where largescale, pristine visuals are concerned

C. Pull up a pew

Matinee recliners from Fortress (the company's most popular model) offer a luxurious experience for up to nine movie watchers





D. An eye for an Eye

A Lutron Grafik Eye QS controller handles six lighting circuits, including LED ceiling lighting and floor-level illumination

E. Space savers

Opting for shallow on-wall speakers (from Totem Acoustics) meant that there was no need to build out the rear and side walls. This created plenty of space around the seating array

F. Shelf life

A key part of the room's revamp was to integrate media storage – this hidden cupboard space adjacent to the screen is a repository for the owners' DVDs and Blu-rays

G. Yama-dabba-doo

For surround sound power and processing, there's nothing esoteric or money-no-object here – a Yamaha RX-A3040 sits in the kit rack





Photo: Musical Images installation

ENJOY THE BEST FOOTBALL!

Now's the perfect time to discover the amazing JVC DLA-X5000 projector – class leading brightness and 4K resolution with e-shift technology for stunning realism and detail in every action.

With 3 showrooms, 7 demonstration suites, experience, expertise, patience and professionalism, for the very best in Home Entertainment there's no better destination this summer than Musical Images.

Procision
HIGHER ENTERTAINMENT



"The X5000 has some great future proofing with HDMI 2.0a inputs, HDCP 2.2 and support for HDR."





4K
e-shift3



3 times award winner
HOME CINEMA CHOICE
"Best Multiroom Installation"

www.musical-images.co.uk

 musical images
 @musical_images

Musical Images Showrooms

126 High Street, Beckenham, Kent BR3 1EB
020 8663 3777 beckenham@musicalimages.co.uk

173 Station Road, Edgware, Middlesex HA8 7JX
020 8952 5535 edgware@musicalimages.co.uk

82 High Street, Harpenden, Hertfordshire AL5 2SP
01582 764246 harpenden@musicalimages.co.uk

Opening times - 9.30am to 5.30pm. All 3 branches are closed on Wednesdays

**HIFI • HOME CINEMA • MULTIROOM AUDIO • HOME AUTOMATION
LIGHTING CONTROL SYSTEMS • AV DESIGN & CONSULTANCY**

Audio Visual Lifestyle Ltd trading as Musical Images. Finance options available, subject to status. E&OE

"truly spectacular"

says the homeowner of this
4K home cinema with Dolby Atmos 7.2.4



CEDIA AWARDS 2016
Best Home Cinema
Over £100,000
FINALIST

At Cyberhomes our home cinemas and smart home installations aren't just about the amazing 4K picture and immersive Dolby Atmos sound.

We can also implement the lighting, the seating, the room acoustic treatments, the intuitive control system from Savant, Crestron or Control4, and so much more.

Call us now on **0333 344 3718** to discuss our project or to book a demonstration in our amazing new demonstration facilities featuring a Dolby® Atmos™ immersive 3D sound experience.

For details visit www.cyberhomes.co.uk/hcc



CEDIA
MEMBER

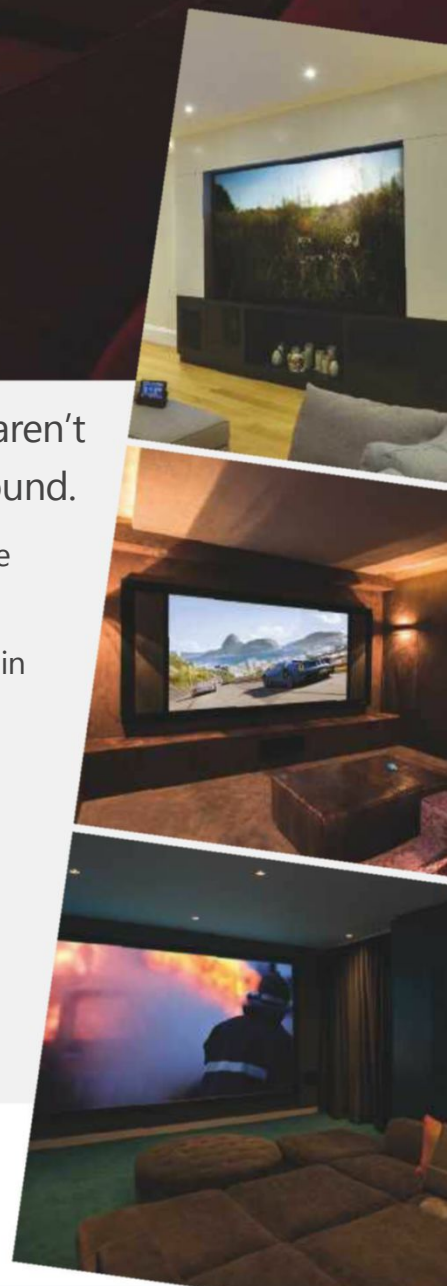


Home cinema design and installation • Lighting control systems • Multi-room audio and video
Home automation • CCTV and security • Data and communication networks • Climate control

0333 344 3718

hello@cyberhomes.co.uk

www.cyberhomes.co.uk



REVIEWS

→ **HARDWARE** **SAMSUNG** 65in curved 4K LED TV using Quantum Dot technology
PIONEER Seven-channel VSX-1131 AV receiver **PANASONIC** Multiroom-ready soundbar/sub duo
LG E6 OLED with Dolby Vision HDR **OPTOMA** Bargain-priced DLP projector **ROTH** Affordable
 soundbar that jettisons a subwoofer **ROUNDUP** 55in 4K TV group test & MORE!

Turned up to eleven!

Anthem refreshes its MRX receiver line with an 11-channel Atmos model that uses clever ARC room-tuning. We get blown away on p44



HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

All prices quoted are approximate and may have changed

AV INFO**PRODUCT:**

65in TV with native 4K resolution and HDR playback

POSITION:

Samsung's flagship 65in 4K screen for 2016

PEERS:

LG OLED65E6;
Panasonic
TX-65DX902;
Sony KD-65XD9305

Direct-lit and pushing its LEDs to new heights, **John Archer** enjoys the impact of this high-price HDR TV

Samsung's big, bright idea

The arrival of high dynamic range (HDR) technology has made brightness a bigger deal in the TV world than it's ever been before. It isn't the only thing you need to unlock HDR's full potential, of course, but it's certainly a key factor in this era when HDR content is already being mastered to anywhere between 1,000 and 4,000 nits.

In recognition of this – and, perhaps, because brightness is a traditional weakness of the OLED TVs made by its great rival LG – Samsung has pushed the luminance of its 2016 LCD TVs to new heights. And representing the Everest when it comes to brightness peaks is the unprecedented 1,400 nits pumped out by the 65in UE65KS9500.

That equates to more than twice the output of LG's latest OLEDs, and contributes to a contrast performance that surpasses the target figure recommended by the UHD Alliance's 'Ultra HD Premium' specifications. In fact, on paper, at least, the UE65KS9500 looks like it's got what it takes to get closer to HDR heaven than any other TV we've seen so far.

Colour champion

The TV isn't just fixated on HDR's expanded brightness range, though. It also features a native UHD resolution along with Quantum Dot technology to make the most of the wide colour gamuts routinely delivered alongside HDR content.

To deliver the sort of localised light controls needed to produce HDR visuals with the clarity the UE65KS9500 is striving for, Samsung has turned to a direct LED lighting engine rather than the edge LED system found in its KS9000 TVs, which had been the brand's top tellies until this series touched down. This engine combines with a local dimming system to output varying light levels from different LED clusters.

The home for all this cutting-edge picture technology is an attractive one. A slinkily slim, gleaming silver frame wraps itself around the screen, while the boomerang-style desktop stand looks dashing without being overpowering.

The fact that the UE65KS9500 has a curved screen earns it extra design brownie points, although, as ever, the curve will divide AV fans. Or put some off entirely. At least

Samsung claims to have tackled the 'distorted reflections' issue associated with curved TVs by applying a moth-eye filter to the UE65KS9500's front that 'soaks up' reflections more than a standard LCD screen.

This set is predictably multimedia savvy. Its external connections box sports three USBs for playing back video, photo and music files from USB storage devices, as well as wired and Wi-Fi network options for streaming from DLNA-enabled devices or accessing Samsung's online services.

The number of these services has been streamlined for 2016 – which is no bad thing in most ways, as I've always thought that quality trumps quantity in the context of a smart TV interface. That said, it's a shame that at the time of writing there are no All4 or Demand 5 catch-up apps alongside the iPlayer, ITV Player, Netflix and Amazon big hitters. The Netflix and Amazon apps both support HDR and Ultra HD, by the way.

Navigating all the TV's many content options feels intuitive and friendly.

Web-slinging HDR

Glutton for HDR goodness that I am, I pushed the UE65KS9500 to its limit right away with *The Amazing Spider-Man 2* on Ultra HD Blu-ray. And for much of the time the results were nothing short of stellar.

Samsung's brightness claim rings true. This 4K whopper opens up the lighter end of HDR visuals in a way I've just not experienced before, which breathes new naturalism into bright scenes – especially the film's exterior sequences like the graduation ceremony – but also adds incredible punch to bright peaks within otherwise dark shots. The electricity-fuelled scrap with Electro at the power station looks believable, detailed, immersive, and flat-out beautiful. More, erm, electrifying than I've ever seen it look before.

1. Unlike the KS9000 series, Samsung's KS9500 sets use a direct LED backlight

2. A secondary zapper is offered for basic, everyday controls





CAPTAIN CRUNCH

The Marvel gang gets fighty in *Captain America: Civil War* p98

The Times Square fight, meanwhile, also highlights the UE65KS9500's spectacular colour performance. There's a delightful combination at work of a huge colour range and ground-breaking brightness that results in stunning saturations and a sense of raw colour 'volume' that sells the benefits of wide colour gamut technology.

Samsung is really promoting the colour prowess of its Quantum Dot technology (see our IFA show report on p20) and it's easy to see why. LG's OLED sets can produce wonderfully rich and nuanced colours given extra emphasis by the peerless black levels they can hit, but the UE65KS9500 proves that adding brightness to the mix can have a pretty transformative effect.

Thankfully, the TV's extreme brightness isn't delivered with wanton abandon. It's used for impact, as it should be, rather than being a defining constant. Even more importantly, it's achieved via the direct lighting/local dimming engine without robbing the image of the excellent black level response that's long been a defining feature of Samsung's LCD sets.

Let's not forget, after all, that darkness is as vital as light to an all-round convincing HDR experience. So it's a relief to find convincing blacks working in tandem with retina-assaulting neon lights and electrical discharges during *The Amazing Spider-Man 2*.

'The TV's extreme brightness isn't delivered with wanton abandon – it's used for impact, as it should be'

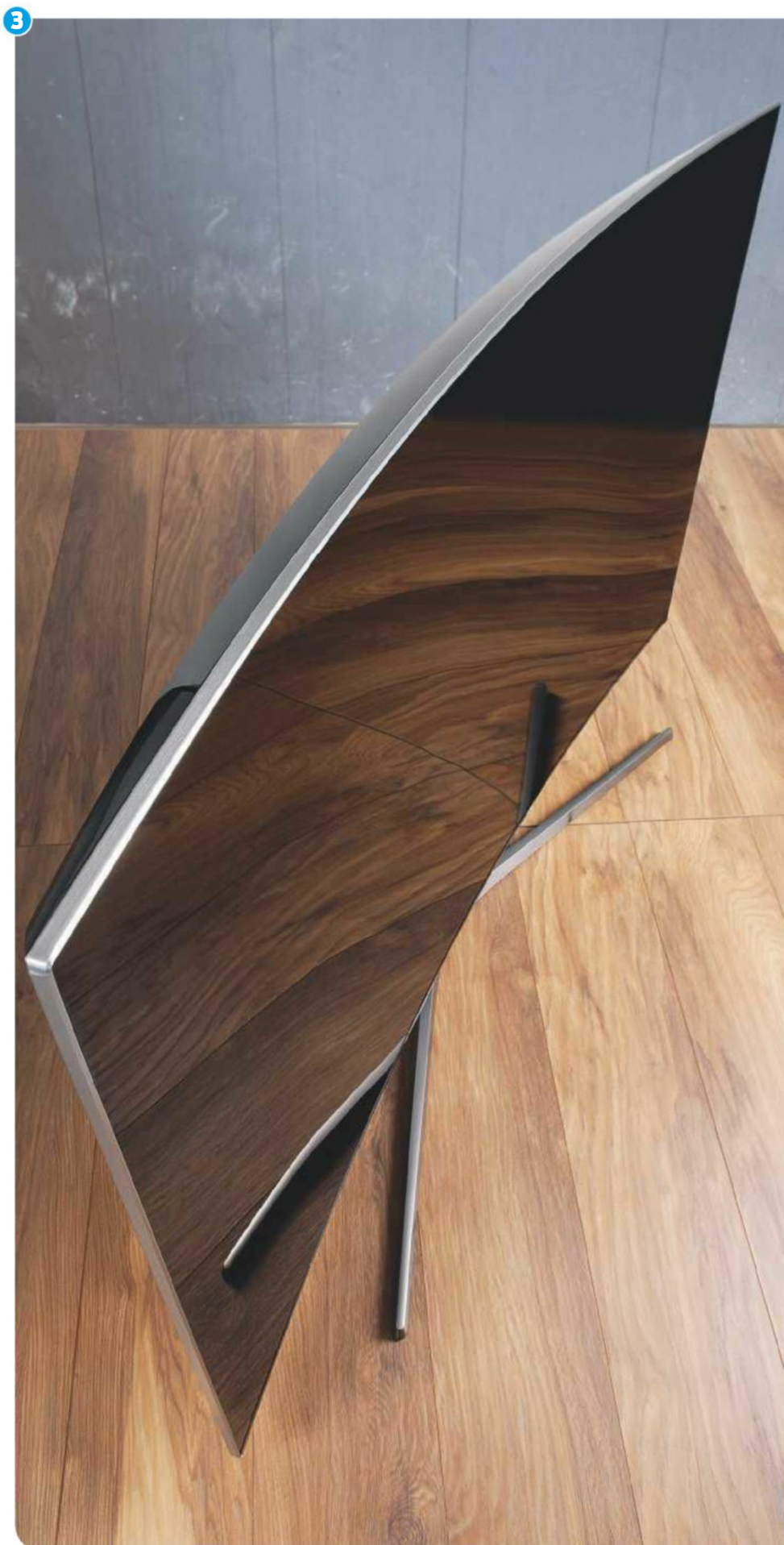
Light management here is good enough to ensure that dark areas don't just look like empty black holes in the picture. There's also lots of subtle shadow detail on show. ASM2's spectacular night-time UHD BD vistas across New York always look full of detail and depth, as well as luminous and richly coloured. During scenes where the UE65KS9500's brightness, colour and contrast talents are all able to shine at the same time you'd pretty much swear you'd died and gone to AV heaven.

There is a price to pay, though, for that dazzling brightness, in the shape of some occasionally quite irritating light 'blooming' around bright objects that appear against a dark backdrop. This is a relatively small distraction versus the more pronounced light banding you get on the step-down KS9000 series, which employs edge LED lighting, but is one area where LG's OLED sets enjoy a significant advantage, as they're able to deliver their illumination with a far greater degree of accuracy.

This top-dog Samsung isn't just outstanding at revealing the joys of HDR and wide colour gamut tech. It also displays native UHD sources with a huge amount of sharpness and clarity, ramming home the advantages of all those pixels with a precision precious few rivals can match. This can be seen in very detailed, deep shots like, again, *Amazing Spider-Man 2*'s expansive city vistas, and in the classy, natural way the TV reproduces the gentle cinematic grain that's part of Sony's UHD transfer.

Full HD on the up

The ordinary Full HD Blu-ray of *The Amazing Spider-Man 2* lacks that HDR impact, but finds this display proficient at upscaling the incoming signal to its UHD resolution.

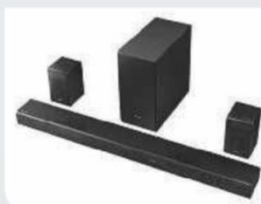


SPECIFICATIONS

3D: No. **4K:** Yes. 3,840 x 2,160 resolution **HDR:** Yes. HDR 10 **TUNER:** Yes. Freeview HD; satellite **CONNECTIONS:** 4 x HDMI inputs; 3 x USB inputs; optical digital audio output; RF input; Ethernet **SOUND:** 60W, 4-channel **BRIGHTNESS (CLAIMED):** 1,400 nits **CONTRAST RATIO (CLAIMED):** 'Mega Contrast' **DIMENSIONS (OFF STAND):** 1,441(w) x 833(h) x 115.9(d)mm **WEIGHT (OFF STAND):** 28.2kg

FEATURES: USB and DLNA multimedia playback; built-in Wi-Fi; HDR+ HDR upscaling engine; Tizen-based smart system; Netflix and Amazon 4K apps; direct LED lighting with Precision Black Pro local dimming; Quantum Dot technology; curved screen with Moth Eye anti-reflection

PARTNER WITH



SAMSUNG HW-K950: £1,300 is a lot to pay for a soundbar, but this Samsung model incorporates four upfiring Atmos channels (two incorporated into wireless rear speakers). The result is a truly immersive performance with little clutter.

doing this, and I suspect many end users will actually prefer the resulting punchier look to pictures. But it does impact the HDR accuracy that Samsung has otherwise worked so hard to deliver.

While the negative points I've raised will be enough to turn some AV enthusiasts

towards LG's latest OLED models (although those, too, struggle a bit with motion), I'll stress that while those OLEDs are uniquely talented at handling dark scenes and eliciting a true black, they can lose detail in very bright areas, and don't deliver as much punch with HDR's bright highlights as the UE65KS9500. Picking between the pictures here and those of a 2016 LG OLED is a matter of personal preference rather than one being definitively better than the other, not to mention other facets (curved or flat panel, smart features, Dolby Vision support, price...)

The UE65KS9500 even continues its rivalry with LG's OLEDs when it comes to sound, as its well-hidden speakers deliver a powerful, open and detailed sound performance that's better than I expected. It manages to rival the excellent sonics produced by the soundbar speaker systems attached to LG's E6 (see p52) and G6 TVs.

Samsung spectacular

My final impression of the UE65KS9500 is that while there are still areas for Samsung to work on – as there is for every TV brand when it comes to HDR – it's perhaps the most spectacular TV I've spent time with this year. I cannot imagine any buyer being disappointed (provided they're not interested in 3D Blu-ray playback, as this model continues Samsung's infuriating ignorance of the format) and from a technical point of view this screen gives an exciting glimpse of where our HDR future is headed ■

HCC VERDICT



Samsung UE65KS9500

→ £3,800 → www.samsung.co.uk

WE SAY: No TV yet has delivered quite such an extravagant demonstration of what the Ultra HD, HDR and wide colour spectrum technologies can achieve.



4

5

There's a crisp, clean feel to the image that's quite remarkable considering how many extra pixels the TV's processing is having to add 'on the fly'.

And the UE65KS9500 doesn't just upscale resolution, either. Samsung has recently introduced a new feature called HDR+ which expands both the luminance and colour range of standard dynamic range sources to give them an HDR effect. This is no rival for true HDR images and purists will dislike it on principle for the way it tinkers with source material. It is, though, by far the most effective 'HDR upscaler' I've seen so far, adding a tangible level of image pop and seeking out bright highlights. As such, I'd suggest it is a real option for people keen to get the maximum impact from their TV as frequently as possible. HDR-toting Blu-rays are still, after all, in relatively short supply.

Motion can cause the Samsung UE65KS9500 some problems. I found the image suffering quite heavily with judder during camera pans, especially 'circular' pans like the one around Eddie and his coach as they celebrate him jumping the 90m slope in the *Eddie The Eagle* Ultra HD Blu-ray.

Another problem is that when playing Ultra HD Blu-rays using Samsung's Movie preset – the setting reckoned to deliver the most accurate HDR picture – areas such as white or blue skies that contain lots of subtle colour shifts can look strangely stripey, as the TV seemingly fails to correctly map all of the colour tones available in the HDR/ wide colour gamut combination.

You can greatly counter the impact of this striping problem if you push the Dynamic contrast option up to Medium or High. Personally I don't have a massive issue

3. Like your TV curved? Then Samsung is your friend

4. The centrally-attached boomerang stand shares the TV's silver finish

5. HDMI connections are housed on an external box

Precision tuned for sonic thrills



Anthem's AV flagship may not offer every toy, but it's a home theatre thriller nonetheless, raves **Steve May**



When it comes to home cinema sound, the elephant isn't in the room. The elephant is the room. It's an inconvenient truth that no matter how good your multichannel sound system, the environment you listen in – and all those resonances and reflections – will have an inordinate influence on what you hear.

All major AV receiver vendors recognise this, employing a multitude of auto equalisation techniques to compensate – Yamaha has YPAO, Pioneer touts MCACC, Audyssey (various flavours) is offered by Denon and Marantz. These systems give variable results, but all use low-cost microphones and are ultimately limited by the processing power resident in the receiver.

Anthem Room Correction (or ARC), which comes with the MRX 1120, is rather different and the impact it has on the audio performance of this receiver is remarkable.

The MRX 1120 is one of the few full-fat 11-channel AVRs available, able to support a 7.2.4 Dolby Atmos speaker layout (a DTS:X update is pending) without recourse to extra amplification. Alternatively, it can be used to run a 5.1 system, with the remaining amplification designated for second zone duties.

It's the hero in a four-strong Anthem lineup. Stablemate MRX 720 offers 11-channel decoding but only has seven channels of amplification onboard. The baby of the quartet is the MRX 520, a 5.1 model. There's also a processor iteration, the AVM 60, which adds balanced audio outputs.

While this receiver can fill a full domestic Atmos theatre, it's more compact than you might think, thanks in part to a hybrid power arrangement. The four height channels are driven by Class D modules, while the main speaker array benefits from traditional Class A/B muscle. Power output is rated at 140W per channel (into eight Ohms), with 4 x 60W going up top.

For your digital sources there are eight HDMI inputs (including one located on the front), with twin outs. All support 2,160p60 content including HDR, wide colour and HDCP 2.2. There's also Audio Return Channel support and MHL for smartphone playtime. Anthem doesn't waste space with legacy inputs, but you will find five digital audio inputs (two optical, three coaxial), plus one optical output and five analogue stereo inputs. There are two subwoofer outputs, along with a full set of pre-outs. For control, there's a 12V trigger and RS232 port.

A front flap on the bottom left of the fascia conceals a headphone jack and USB – but the latter is only for software updates, not media playback. Ditto the USB around the back. Naturally the MRX 1120 also has Wi-Fi built in, if you're unable to hardwire to a network. A pair of aerials can be screwed to the rear.

Taking a view

Usability is generally good. There's HDMI bypass so that the system doesn't need to be powered up to view connected devices. You can set this to the last input used or a specific feed, such as a set-top box.

All inputs can be custom labelled and, as I discovered after setting up the system, you don't need to laboriously finger the IR remote, as you can use the rotary volume dial to rename (which is a lot quicker). The remote itself is backlit and well laid out.

AV INFO

PRODUCT:
11-channel Dolby Atmos AV receiver

POSITION:
Flagship in the Anthem range – there are seven- and five-channel MRX models, too

PEERS:
Onkyo TX-RZ3100;
Denon AVR-X6300H

1. With its 11 amplifier channels, the MRX 1120 supports 7.2.4 Atmos

2. Anthem's remote is backlit and easy to use





3

It doesn't take long to realise that some features you might expect to find on a £4,000 AVR are absent here. Most importantly, there's no network file playback or integrated music services. Owners are clearly expected to source them elsewhere.

And there's no option to download firmware from the internet, either. Updates are by USB only. Given that the Anthem brand is very custom install centric, this approach helps avoid clashes with integrated control systems from the likes of Control4 and Crestron.

'ARC EQ is very powerful and exceptionally customisable – and transpires to be astonishingly effective'

Out of the box, the MRX 1120 has three inputs assigned, plus FM radio and DTS Play-Fi multiroom. If these aren't required they can be deleted. Additional inputs can be created and assigned as needed.

The receiver allows you to set up 29 in total. We're not talking physical inputs as such, more profiles which point to what's available. You can choose to have multiple inputs looking at the same signal, so a single Blu-ray player could actually feed any number of named inputs – home cinema, stereo, media player etc.

Room correction can also be assigned on a per-input basis. Additional post-processing niceties include Dolby Volume, DTS Neo:6 and two proprietary Anthem modes

– AnthemLogic-Cinema and AnthemLogic-Music. Dolby Surround is the *de facto* option for sonic upscaling.

Welding with ARC

You don't have to run Anthem's room calibration from the get go, as you can setup from the main menu. The text-based UI allows for speaker assignment and placement. But why postpone the fun?

ARC has been developed by Paradigm Electronics, Anthem's Canadian parent. It's designed to measure your listening room, with data captured by the supplied microphone. This can then be tweaked in a PC. Typically room correction would be carried out by the dealer who sells you the receiver, although enthusiasts could run it themselves.

The supplied microphone is individually serial-numbered and calibrated. This serial number tallies with the software supplied on a CD Rom. If your laptop doesn't have a disc drive, you can download the specific calibration file for the mic. The pack also includes a decent-looking tripod and a 4m USB cable.

ARC is very powerful and exceptionally customisable. The MRX 1120 allows you to create four profiles, all with individual sonic characteristics. One might be for standard cinema listening, another might drop the subwoofer for late-night boxset binges. A third could be for two-channel only. Alternatively, you can create listening position profiles – perhaps covering various seating positions.

If you opt to run the software in automatic mode, little can actually go wrong. Sweep your system with Quick Measure to check everything's connected before getting

4



stuck in. A minimum of five seating positions should be measured – although you can go to ten if you have a big listening room. Once analysed, you can study an uncorrected trace of every speaker, comparing raw data against a lab standard target curve. It's fascinating stuff, as you can see just what's happening in your listening room when it comes to room nodes and anomalies. You can also use the insight to identify any seating positions which suffer from a major room issue – and then make a mental note not to sit there yourself.

Note that with ARC there's no way to capture the distance of the microphone in relation to the loudspeakers, so that information has to be input manually.

Pressing 'calculate' then engages the power of your computer. Before you know it, every channel matches a target curve. Once crunched, the settings can be uploaded into the receiver and the data saved as a reference PDF.

Once you've done the EQ, you can print off a before-and-after document which shows all the correction performed, including your speaker's response characteristics.

Take my breath away

Anthem Room Correction transpires to be brilliant – the results of all this jiggery-pokery are breathtakingly good. Dialogue is perfectly delineated, front-stage imaging balanced and expansive. There's no unwanted emphasis or stridency, even with complex mixes like *Batman v Superman: Dawn of Justice*. The receiver simply juggles the disparate parts of the soundtrack with aplomb.

My fave Dolby Atmos trailer, *Amaze*, with its 360-degree bird flight and rich bass, causes me to giggle inadvertently. The LFE hits faster and harder than Superman in a hurry.

For sheer visceral thrills, few movies open with as much latent ferocity as *Mad Max: Fury Road*. An unapologetic V8 revs over the Village Roadshow logo, before soundbites detailing mankind's apocalyptic fate light up every channel in my 7.2.4 setup. A plaintive 'Where are you Max?' haunts the expanded soundstage before a wave of vehicles fly front-to-back. I expected to see plaster falling from my ceiling in celebration.

The MRX 1120 delights in the mix's sonic grit and debris, igniting explosive LFE. My head spins as the sound design takes me on a dizzying chase through underground tunnels. *Mad Max...*'s Atmos mix sounds sensational – it's detailed,

SPECIFICATIONS

DOLBY ATMOS: Yes **DTS:X:** Yes – via future firmware update **THX:** No **POWER OUTPUT (CLAIMED):** 7 x 140W plus 4 x 60W (into eight Ohms) **HDMI:** 8 x inputs; 2 x outputs **AV INPUTS:** 5 x digital audio (2 x optical and 3 x coaxial) **ANALOGUE MULTICHANNEL INPUT:** No **MULTICHANNEL OUTPUT:** Yes. 11.2-channel processing **MULTIROOM:** Yes. Zone 2 **VIDEO UPSCALING:** Yes. To 2,160p **DIMENSIONS:** 439(w) x 375(d) x 165(h)mm **WEIGHT:** 14.6kg

FEATURES: Anthem Room Correction kit including USB microphone; DTS Play-Fi multiroom support; integrated Control4 support; Ethernet; Wi-Fi; FM tuner; USB service ports; 32-bit/768kHz DACs; iOS remote app; backlit remote control; HDCP 2.2 on HDMI 2.0a inputs; HDMI standby bypass; Dolby Surround; DTS Neo:6; All-channel stereo mode; 4 x speaker profile memories

PARTNER WITH



MAD MAX: FURY ROAD

Warner's Ultra HD and Full HD BD releases of George Miller's celebrated and action-packed sequel feature one of our favourite Atmos tracks. This a masterclass in sound design that should be in everyone's collection.

fulsome and breathlessly energetic. And that's just at -20dB. The MRX 1120 has more than enough fuel to power this road warrior.

Imaging is startling. When Pi first meets Richard Parker, in *Life of Pi* (DTS-HD MA 7.1), the lion pads purposely from the centre channel (eyes shut, I know exactly where he is). Later, when cast adrift, menacing waves lap around, the height channels feeding ambience stolen from the mix. And there's no noticeable discrepancy between the Class D heights and the traditional A/B bedrock. The entire system licks and pans with urgency.

This disc may not be native 3D audio but the sense of immersion is utterly convincing. In fact, for sheer accuracy the only system I've heard in my room that matches it used a Datasat RS20i processor, calibrated manually with Dirac Live – and that's the best part of £20,000 without amplification. Arcam's Dirac-carrying AVR850 is a more relative contender, but that's a seven-channel design only.

The MRX 1120 sounds great with stereo, too. A DSD rip (from Sony's PS-HX500 turntable) of the vinyl *Dresden* by UK Decay perfectly places Abbo's insistent vocals centre-stage; you can visualize him hunched in front of the drum kit, as flanking guitars jangle. Suddenly I'm back at the Greyhound in Fulham Palace road, amidst proto Goths.

Overall, the Anthem MRX 1120 is a fabulously effective AV receiver, and Anthem's sophisticated room correction is astonishingly effective. Once dialed in, the AVR sounds beautifully precise and balanced. Soundtracks are tight and involving: bass is deep and granite hard, while dialogue remains crisp and articulate. While this receiver may not tick all the feature boxes of better-known competitors, it delivers absolutely where it counts. This is surround sound unbound. And it's glorious ■

3. 11-channel pre-outs are an option if you want to use separate power amplification

4. The receiver is supplied with a calibrated USB mic to connect to your PC



HCC VERDICT



Anthem MRX 1120

→ £4,000 → www.anthemavs.co.uk

WE SAY: This 11-channel AVR may be low on connected frills but it delivers a sizzling audio performance bolstered by the brilliant Anthem Room Correction system

AV INFO

PRODUCT:
Dolby Atmos/DTS:X
AV receiver

POSITION:
Pioneer's entry-level
seven-channel model

PEERS:
Denon AVR-X2300W;
Yamaha MusicCast
RX-V581

1. The AVR has a fresh
take on Pioneer's
remote control

2. Fat chrome feet
raise the VSX-1131
off your AV shelf

Another challenger for the budget AVR crown appears on **Mark Craven's** radar

Pioneer's bass beast

It's getting hard to find many points of difference between AV receivers around the key £500 mark. Pioneer's VSX-1131, priced £550, offers a specifications sheet with few surprises, beyond the fact that it's very well featured indeed. Whatever you're hoping to find here, you probably will.

First up, connections. Pioneer's new mass-market power-pusher features more HDMI inputs than you'll ever need (okay, seven), plus dual HDMI outputs. 4K support extends to 4:4:4 at 60p; HDR passthrough (of the HDR 10 variety anyway, not Dolby Vision) is also present.

Additional connective options include the networking trinity of Ethernet, Wi-Fi and Bluetooth, indicating that this is an AVR with music streaming very much on its mind – Spotify, Deezer, AirPlay, Tidal, TuneIn and Google Play Music are all on the spec sheet. High-res audio sources get a look in, too, with 192kHz/24-bit support for FLAC, ALAC, AIFF and WAV codecs, plus DSD at 2.8/5.6MHz. There's a front-mounted USB input for any portable drives you have loaded with tunes.

Of the more home cinema-oriented features, topping the list is Dolby Atmos bitstream decoding, allowing you to run a 5.1.2 setup via the AVR's seven Direct Energy amplifier channels. The latter are rated at an eye-watering 160W-per-channel, but only into a six Ohm, one-channel, 1kHz measurement with 1% THD. Don't expect that much grunt in real-world multichannel conditions.

Joining Dolby Atmos will be support for DTS:X soundtracks. By the time you read this, the firmware update should have been released, but wasn't available at the time of review.

Setup is white-gloved by Pioneer's MCACC auto EQ system, for which there's the usual puck-style microphone.

Cosmetically, at first glance there's little to differentiate the VSX-1131 from any of its recent forebears. That's not to say its symmetrical front fascia design, chrome feet and funky black aesthetic (preferable, if you ask me, to the also available silver version) doesn't impress. Around the back, however, there's been a bit of a tidy up and input reshuffle compared to the VSX-1130.

Oddly, given the way AVR makers are jettisoning analogue hookups, the VSX-1131 has gained some stereo analogue inputs (although it's lost a composite video out). Of more importance practically, speaker binding posts have been centralised, which is actually very useful if you've struggled in the past with low-down placement.

Another welcome design refresh concerns the remote control. I've found Pioneer AVR handsets in the past to be horrid affairs with any regard for ease-of-use trampled by a desire to offer buttonry for every conceivable feature. Finally, it seems Pioneer has listened to everyone's moaning (and noticed its rivals' revamps) as this handset is severely stripped back. Feeling more akin to a typical TV zapper, it offers large direction keys making menu browsing simple and volume buttons that can be found easily without having to even look. Good job.

The menus are new too, with neat graphics and a slicker appeal than before. They're unlikely to confuse. As always, Pioneer offers an app that's colourful and fun to play with, but not necessarily the easiest way to drive the AVR.

All set for setup...

When it came to setup, I had some issues with this iteration of MCACC. It's blissfully short – by only using one sweep from a lone sitting position – but produced some iffy results in my room. An initial measurement set front speakers as large and the surrounds small (when all were identical Monitor Audio MASS standmounts), and undercut the surround right measurement by a good two metres. When re-run, it set all speakers to large, and reported different distances despite nothing having moved. Hmm. The upshot was I had to go into the manual speaker setup menus to correct these oversights. This is the sort of user interaction that low-price AVR buyers are often hoping to avoid.





Furthermore, during movie playback the differences between MCACC on and off proved less forthright than I'm used to. The sonic signature certainly altered, but choosing a preference was a head-scratcher.

Despite this hiccup, the VSX-1131 performs well, with a predilection for bass punch and slick effects delivery.

For regular TV watching there's a plethora of DSP modes. Confusingly, Auto Surround mode only applies if a multichannel signal is input – whack the 'SURR' button on the handset to scroll through various flavours of post-processing with Dolby Surround, plus DTS Neo:6 Music and Cinema and various extended mono/stereo options. The differences between many are subtle, but if you want to watch in 5/7.1, you'll need to find one that suits. With a stereo broadcast of *Beverly Hills Cop II*, Dolby Surround Action did roughly as advertised, routing effects and the synthy score to the surround channels and heightening immersion levels. A rolling undercurrent of LF was sprinkled with crisp trebles and well-integrated dialogue. To make on-the-fly sound adjustments, a pop-up window offers useful centre and subwoofer level tweaks.

Merely an appetiser, though – the VSX-1131 finds a new performance level with lossless multichannel film soundtracks, putting in a shift that's hard to hate at this price.

Chapter 5 of Denzel Washington revenge thriller *The Equalizer* opens with a Mercedes sports car revving to a standstill outside a restaurant. The engine growls through the front soundstage, while the subwoofer picks up the associated LFE throb in the soundtrack. Another vehicle tracks off through the left channels. Then it's into the eatery, where the VSX-1131 encases you in the faint clatter of cutlery and muted conversation. Ruskie baddies bark at each other near the bar. This is the calm before the storm, when Denzel reveals himself to be the ruthless killer we'd all suspected. Given licence to let fly, the Pioneer laps it up. As half-a-dozen mobsters are dispatched with gun and knife, there's a well-marshalled combination of sickly flesh-tearing sounds and zippy gun reports.

In fact this AVR seems to revel in bass and big impacts. It's a defining characteristic, but surely a welcome one. Later in *The Equalizer*, our hero blows up a tanker ship. A slo-mo fireball rolls through my room with remarkable wallop and undulation.

A concern may be that this rampaging low-end and powerful presentation is hiding shortfalls elsewhere. Certainly not with steering or effects separation – the subterranean shootout in *Sicario* (Dolby Atmos) is

SPECIFICATIONS

DOLBY ATMOS: Yes **DTS:X:** Yes – via future firmware update **THX:** No **POWER OUTPUT (CLAIMED):** 7 x 160W plus 4 x 60W (into 6 Ohms) **HDMI:** 7 x inputs; 2 x outputs **AV INPUTS:** 3 x digital audio (2 x optical and 1 x coaxial); component video; 2 x composite video **ANALOGUE MULTICHANNEL INPUT:** No **MULTICHANNEL OUTPUT:** No. **MULTIROOM:** Yes, Zone 2 **VIDEO UPSCALING:** Yes, To 2,160p **DIMENSIONS:** 435(w) x 370(d) x 173(h)mm **WEIGHT:** 10kg

FEATURES: Ethernet; Wi-Fi; Bluetooth; USB; MCACC auto EQ/setup; iControl AV5 app; AM/FM tuner; AirPlay; Spotify; TuneIn radio; dual subwoofer outputs; DSD 2.8/5.6MHz playback; hi-res FLAC, ALAC, AIFF and WAV support; 384kHz/32-bit DAC; DSP sound modes; Advanced Sound Retriever; 4K/HDR passthrough with HDCP 2.2 support; FireConnect multiroom support

PARTNER WITH



PIONEER BDP-LX58: Baby brother to the top-of-the-range LX88, this Full HD BD deck still dazzles with its excellent build quality, hi-res audio chops and faultless performance. Available for £500 – there are multiregion mods around, too...

well-orchestrated. However, the VSX-1131 can feel a little light on mid-range drive and articulation. Centre-channel dialogue is clean and clear, but I wanted a bit more body to voices. Likewise, with music material, the AVR is more in tune with bassline and rhythmic impact than unearthing subtleties in instrumentation. Def Leppard's rocker *Animal* sounds stonkingly energetic and drips with swagger, but the guitars need more of a cutting-edge.

Bang on the money

Well-connected, easy to use, moody-looking and endowed with a dynamic, warmish sound, Pioneer's VSX-1131 is mostly bang on the money. Just be prepared to double-check what MCACC instigates and trade-off some sonic balance and nuance in favour of high-octane impact ■

HCC VERDICT



Pioneer VSX-1131

→ £550 → www.pioneer.co.uk

WE SAY: A punchy and precise sound – and revamped remote and menus – make this AVR a home cinema charmer, but don't expect wonders from the entry-level MCACC setup.

3



3. Not overlaid with physical inputs, but there are no glaring omissions

AVR850

A NEW ERA BEGINS



**Arcam's world class engineering delivers
ultimate reference sound quality**

ARCAM

BRINGING MUSIC AND MOVIES TO LIFE

www.arcam.co.uk



GAME ON!

The *Warcraft* movie offers CG thrills, fantasy spills p101



This high-end OLED TV is the best that LG has ever made, suggests **Steve May**

In pursuit of perfect black

There's something stunningly beautiful about the LG E6 – and that's without even turning it on. With its unfeasibly thin picture-on-glass design and Harman/Kardon crafted soundbar, this high-end OLED screen looks a masterclass in industrial design. It'll make visitors to your movie room gawp in surprise, and that's without showing them the £4,500 price tag.

The OLED65E6 sits below LG's Signature G6 flagship (see HCC #264), but uses the same panel and image processing technology – differences between the two concern the potency of the speaker bar and stand design. While we're reviewing the 65in version here, it's also available in a 55in guise.

The set sports four HDCP 2.2-compliant HDMI and three USBs (one of which is a fast 3.0 variant), but analogue video is relegated to minijack inputs. There's an optical digital audio output and Ethernet port, plus a single satellite tuner input. Terrestrial TV comes via solo Freeview HD; a Freeview Play upgrade is due. Obviously there's (dual-band) Wi-Fi onboard.

There are two remotes, a conventionally designed one incorporating a Magic Pointer to navigate LG's WebOS platform, the other a slim job for those averse to buttons. Finishes appear metallic but are, in fact, just silver plastic.

LG's user interface work continues to impress. Navigation is quick. A settings menu throws up relevant graphics on the right of the screen. If you can't do what you want here there's the option of a more detailed menu on the left. Now in its third iteration, WebOS has had several minor modifications since launch, but usability remains largely unchanged. Apps, channels and inputs are accessed via a bar at the bottom of the display. You can reorder the tiles here to suit. Content support is wide. There's a good range of video services, including BBC iPlayer and ITV Hub, plus Netflix, Amazon and Now TV.

Pick a preset

Onto the real attraction of this set: image quality. Pleasingly, this is superb straight from the box. There's a veritable smorgasbord of viewing options – Standard, Eco, Cinema, Sports, Game, Photo, HDR Effect (variable between Low, Medium and High),

plus ISF Expert Bright and Dark Room settings. Those uninterested in calibration (the TV offers extensive controls) can stick to Standard or Cinema. The HDR Effect is intended for SDR content. Personally, I think this is best ignored, although I know my colleague John Archer is more partial to pseudo HDR.

As a rule of thumb, sharpness should be set no higher than 10, as excessive ringing starts to kick in beyond that, effectively obscuring fine detail.

Unlike many rival sets, and perhaps a USP for some, you still get to wear funny glasses. The E6 is passive 3D compatible, and also supports Dual Play for split-screen gaming – although I'm not sure anyone actually does that any more. Two pairs of specs are provided.

Having suffered some dreadful passive 3D implementations on previous LG LCD screens, it's a relief to report here that the presentation is generally excellent, with a real sense of depth and no obvious crosstalk. The image (on the *Tangled* Blu-ray) did sporadically seem to disengage from the bezel and pivot for no good reason, but overall the effect is terrific.

And with 2D the E6's picture performance is outstanding. This set looks positively sensational with regular 1080i broadcasts, be they via Sky or DVB. Upscaled HD content has a sheen that's beguiling and bright peak whites that pop – you'll notice this immediately on graphics and white text. And with 4K content, fine detail can be sublime. Of course, it's in the contentious area of HDR (High Dynamic Range) that things get particularly interesting.



AV INFO

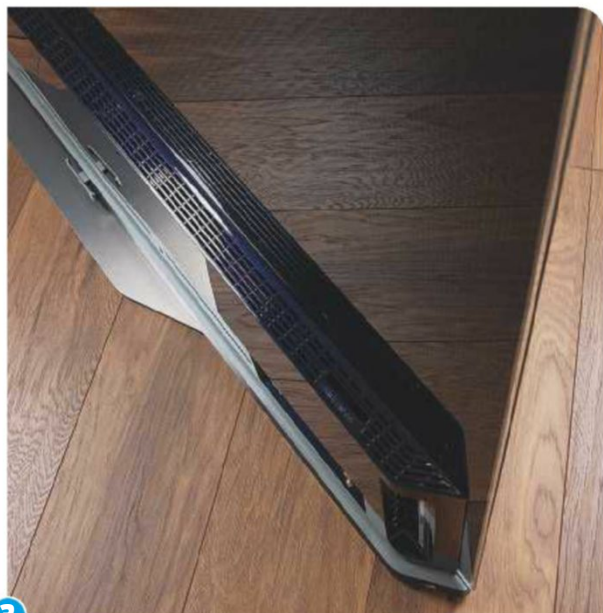
PRODUCT:
4K & HDR OLED TV

POSITION:
Premium HDR OLED, sitting one rung beneath LG's Signature G6 series

PEERS:
Panasonic TX-65DX902B;
Samsung 65KS9500

1. The E6 shares the same panel and processing as the more expensive G6 flagship

2. Both of LG's zappers are simple to use



3

The set is certified Ultra HD Premium. As it's an OLED panel, though, this means it needs to deliver at least 540 nits peak brightness (rather than the 1,000 nits of LCD rivals) and a better-than-LCD black level of 0.0005 nits. This it appears to manage without any problem, and because OLED is self-emissive, there's no backlight clouding issues to diminish bright highlights. Deep blacks are gorgeous. While the set clearly doesn't offer the luminosity of rival premium LED TVs, the dynamic effect is still palpable.

When watching HDR 10 content from a 4K UHD Blu-ray, viewing modes are locked to HDR Standard, HDR Bright and HDR Vivid. Of these three, I found the Bright setting the most rewarding. In Standard mode, content seemed a tad flat and lacking in detail.

A vision of beauty?

Currently, LG is the only UK screen brand to offer support for Dolby Vision (and frankly looks likely to be for some time). So what does this actually mean? Well, if you opt to watch one of the few Dolby Vision-encoded streams from Netflix (*Marco Polo* or Adam Sandler's *Ridiculous 6*), you'll notice a change to your viewing options. They become Movie Bright, Movie Dark and Vivid.

While *Ridiculous 6* may not be a rollicking classic, via this LG it does feature beautiful textures, and has real glint and shine – Danny Trejo's golden grille looks to be worth a small fortune. When playing Amazon Video HDR, the mode option changes again, to a plain old HDR Standard preset.

It's impossible to compare HDR 10 with Dolby Vision on the same Netflix streams – you get what you're given. So does Dolby HDR look better than HDR 10? At this stage, with a paucity of content and no other compatible displays, it'd be foolish to say. The Dolby format certainly looks good on this LG, though, showcasing nuanced colours and subtle light handling.

On some super-bright LCD TVs, peak HDR can actually be pretty startling and hard to get used to. At no point does that apply to LG's OLED visuals. This is a sumptuous eyeball experience, rather than overpowering.

Of course, HDR content isn't just about peak whites; the extended colour gamut is also impactful. The 4K Blu-ray release of *Batman v Superman...* reveals just how dramatic

SPECIFICATIONS

3D: Yes. Passive **4K:** Yes. 3,840 x 2,160 resolution **HDR:** Yes. HDR 10; Dolby Vision **TUNER:** Yes. Freeview HD; satellite **CONNECTIONS:** 4 x HDMI inputs; 3 x USB (one 3.0); mini-jack component/composite video input; Ethernet; optical digital audio output; CI slot; headphone jack **SOUND:** 40W, 2.2-channel speaker bar **BRIGHTNESS (CLAIMED):** N/A **CONTRAST RATIO (CLAIMED):** 'Infinite contrast' **DIMENSIONS (OFF STAND):** 1,461(w) x 893(h) x 56.7(d)mm **WEIGHT (OFF STAND):** 22.8kg

FEATURES: Dual-band Wi-Fi; Miracast, WiDi; DLNA/USB multimedia playback; USB timeshifting; WebOS 3.0; Bluetooth; Ultra HD Premium certified; OLED panel

PARTNER WITH



XBOX ONE S: Microsoft gives its console a makeover to support 4K disc playback, streaming and onboard upscaling of games. The result is that the 500GB model (£250) is a good budget 4K buy – handy if you've spent £4.5K on a TV...

HDR colour grading can appear. The wider gamut gives full rein to Zack Snyder's heavily-filtered aesthetic.

When Superman descends from the sky prior to the explosive Senate hearing, he drops down against a backdrop of yellow-orange clouds. The sun, clearly defined, peaks out top-right, with the surrounding sky a deep blue. The same sequence on the SDR Blu-ray is nowhere near as beautiful; the clouds above the Capitol building are white-grey and the sun an indistinguishable brighter blob. The sky isn't deep blue either. It looks remarkably different.

Care needs to be taken with motion handling, as LG's Trumotion processing is heavy-handed. Both the Smooth and Clear settings introduce overt motion resolution artefacts around moving objects. Turning Trumotion off solves this, but there's a drop in motion resolution. The best catch-all option is the User setting. A combination of de-judder at 3 and de-blur at 10 results in minimal motion artefacts and smoothed horizontal pans.

Intense and pure

Overall, the E6 is a magnificent TV. It's the best from LG that I've ever seen, and in many ways is the spiritual successor to Pioneer's long-lamented Kuro plasma line. There's an intensity and purity to its images which is rewardingly similar.

And functionality is forward-thinking, with Dolby Vision an exciting addition. That said, HDR is almost a distraction when it comes to explaining the inherent beauty of the E6's image quality. Those deep, perfect blacks and rich colours make for a stunning visual experience, be the content HD or 2,160p. Mix in a superior smart TV platform, cracking sound system and superb design – plus better value than the superficially pimped up G6 – and you have a high-end display that demands to be seen ■

3. Unlike the C6 range, the E6 uses a flat, instead of curved, panel design

HCC VERDICT



LG OLED65E6

→ £4,500 → www.lg.com/uk

WE SAY: OLED makes a convincing case for itself with this drop-dead gorgeous display – fabulous with HD, stunning with 4K HDR, it makes even rotten TV shows worth watching.

Never has **top quality** home cinema seating been **so affordable**



FrontRow™ Classic Seating from £685.00

- Modular design for curved and straight seating configurations
- Large Range of Fabrics and Leather options
- Black leather available from stock
- Optional drinks trays and cup holders

NEW!



FrontRow™ Modern Seating

- Straight and corner configurations
- Full Leather or Fabric
- Large selection of colours
- Two tone colour options
- Manual or electric recliners
- Adjustable headrests
- Prices from £510.00

All FrontRow™ seating include a space-maximising inclining mechanism that allows seating to be placed close to a wall and include a comprehensive 5 year warranty including accidental damage. A free design service is available to ensure the seating configuration is suitable for your room.

For further information please call: 01892 552561 or visit www.frontrow-seating.co.uk

FrontRow™ Home Cinema Seating, 69 London Road, Southborough, Tunbridge Wells, Kent TN4 0PA



Pana's one for ALL?

The latest big-brand soundbar with multiroom ambitions impresses **Danny Phillips** with its do-it-all ethos, but can it handle his Man of Steel Blu-ray soundtrack?

AV INFO

PRODUCT:
Streaming/
multiroom soundbar

POSITION:
Above a host
of non-AllPlay
soundbars in the
Panasonic range

PEERS:
LG SH7;
Samsung HW-K650

IT'S SAFE TO say that Panasonic's soundbars haven't exactly set the world alight in terms of performance, but the Japanese behemoth can never be accused of short-changing its customers on features or spec.

That's certainly the case with the range-topping SC-ALL70T, a 3.1-channel affair with a claimed 350W of power under the bonnet. It comes equipped with multiroom functionality, music streaming, a wireless subwoofer, Bluetooth and much more, all for £400. On paper it looks like a sweet deal.

It's a good-looking soundbar too, wrapped in silky black cloth with snazzy chrome trim at both ends and glossy end panels. The plastic-fantastic back end is a reminder of Panasonic's mass-market nature but on the whole it feels like a well-made speaker.

Lay it flat on a TV stand and the unit slopes down elegantly towards the front, and helpfully its low-profile design is unlikely to block the path of your TV remote's infrared beam. If it does, Panasonic supplies an IR blaster.

However, there's one glaring problem with the design – laid flat, the LED display faces upwards and can't be seen from your sitting position. Of course, it's visible when

you mount the soundbar on a wall (all the brackets and screws are supplied) but that's no good for the majority of users who just want to place it in front of their TV.

A touch too much?

At just under a metre wide it's a large soundbar and therefore better-suited to big living room TVs than smaller bedroom sets. The touch-sensitive buttons at both ends are annoyingly easy to press accidentally but cover all bases; at one end are volume, input and Bluetooth pairing, while the other end sports an NFC touch point.

Connections include a single HDMI input and output – offering full 4K and HDCP 2.2 support – plus optical digital audio, Ethernet and 3.5mm minijack ports.

The wireless subwoofer is a typical Panasonic affair – vertically-aligned, rectangular and finished in gloss-black plastic. The budget build doesn't exactly scream 'high performance' but at least the compact size makes it easy to accommodate. It doesn't require any installation either as it pairs automatically.

Spec-wise the SC-ALL70T uses a trio of 2.5in full-range drivers for left/centre/right duties, each fed 70W of grunt,

while the sub employs a 6.25in woofer and draws on a suggested 140W of juice.

As a package, this Panasonic brims with features, but the highlight is Qualcomm's AllPlay multiroom system, managed by a likeable smartphone app called Music Stream. There are plenty of systems like it but this one is particularly reliable and easy to use – an advantage of adopting Qualcomm's tried and tested platform.

It allows you to stream music from DLNA devices and Spotify and Napster, with internet radio from AUPEO! and AllPlay Radio. A few more services wouldn't go amiss but Spotify support will suffice for many. You can play music through the soundbar solo or play the same thing through other Panasonic ALL speakers. And you can add wireless speakers as rear channels to create a full 5.1 system.

Another particularly nifty feature is the ability to re-stream any source from the SC-ALL70T to other ALL speakers around the house, be it Bluetooth, Blu-ray or TV.

The app's straightforward layout and glitch-free operation makes it easy to carry out potentially complicated tasks like speaker grouping – just drag and drop the icons onto each other. The re-streaming feature works brilliantly too and the app had no trouble exploring huge libraries of music on my NAS drives and laptops. The AllPlay system supports MP3, FLAC, ALAC and WAV (up to 192kHz/24-bit).

The app controls simple functions like volume and playback, but if you're in a hurry there's a physical remote in the box. This is small, plasticky and fiddly to use; for the money it should be better.

Hit the Sound button and you can toggle through a selection of presets, Clear-mode Dialog settings and H.Bass. The ALL70T decodes Dolby Digital and DTS, while Dolby Virtual Speaker and Panasonic's 3D Surround processing expand the soundstage.

A flying start

So far so good, but let's get down to brass tacks: performance. Does the SC-ALL70T deliver the goods? Well, during *Man of Steel* it's certainly an engaging, enthusiastic performer with no shortage of poke in the movie's epic moments, although it needs more composure and refinement to really make them fly.

As Jor-El soars through a crumbling Krypton to get his son to safety, the relentless bangs and crashes are suitably vigorous and underpinned by big dollops of bass.

The subwoofer rumbles almost constantly with little or no variation in intensity, but manages to convey the

SPECIFICATIONS

DRIVE UNITS: 3 x 2.5in full-range drivers **AMPLIFICATION (CLAIMED):** 350W
CONNECTIONS: HDMI input; HDMI output (ARC); optical digital audio input; 3.5mm minijack input; Ethernet **DOLBY TRUEHD/DTS-HD MA:** No/No
SEPARATE SUBWOOFER: Yes. 6.25in bass driver **REMOTE CONTROL:** Yes
DIMENSIONS: 950(w) x 55(h) x 120(d)mm **WEIGHT:** 2.5kg

FEATURES: Qualcomm AllPlay multiroom system with Panasonic Music Streaming app; Spotify, Napster, AUPEO!, AllPlay radio; Dolby Virtual Speaker; 3D Surround; 3D Clear-mode Dialogue; Standard, Stadium, Music, Cinema, News and Stereo presets; four dialogue and subwoofer settings; H.Bass; wall-mounting; wireless sub; MP3, FLAC, ALAC, WAV (up to 192kHz/24-bit); Bluetooth with NFC; Dolby Digital/DTS decoding

PARTNER WITH



PANASONIC SC-ALL2: These cute-looking standalone mono multiroom speakers can partner the 'bar to create a wireless 5.1 array. Selling for £170-a-piece, they also feature an LED clock, alarm function and top-mounted preset keys.

scale of the planetary destruction well. It also imbues male voices with a good sense of depth.

The percussive score drives hard and the soundstage is vast. 3D Clear Dialogue opens it up nicely; as Jor-El surveys Krypton, the scene has an expansive scope. Spaceships, creatures and fireballs sweep smoothly across the front of the room and beyond the edges of the 'bar.

It's a lively listening experience with enough puff to fill a big room – there probably isn't a TV on Earth that musters this sort of power. Trouble is, it's all a little superficial. The loud, raucous presentation makes a good first impression, but over time more discerning listeners might take exception to the 'bar's brash, fatiguing tone. It's not as bad as some previous models, but not up there with the best.

It could also do with a bit more finesse and insight. Zesty high-frequency reproduction adds crispness, but subtler details get lost amid the chaos. And bass can be rather heavy-handed too. Without careful tweaking of the subwoofer level and H.Bass mode, low frequencies can end up stifling the other elements.

Music playback is much the same. Beats have plenty of bite and the subwoofer gives basslines presence, but the midrange and top-end lack nuance and sparkle. It does a decent job for uncritical listening, though.

I don't know what...

As a music streamer or multiroom component, the SC-ALL70T is a slick, flexible operator, taking full advantage of Panasonic's well-designed app. It's also packed with features and looks nice. But while its sound is a definite improvement on earlier Panasonic soundbars, it lacks the added *je ne sais quoi* to trouble the best products in this class ■

1. The black and chrome styling will surely blend well with most setups

2. Controls are mounted at each end of the 'bar

2



HCC VERDICT



Panasonic SC-ALL70T

→ £400 → www.panasonic.co.uk

WE SAY: The SC-ALL70T is a superb soundbar in many ways, offering slick multiroom operation and powerful sound, but lacks the wow factor sonically



Connect with us

Get the best from your movies, TV and games with the latest addition to the award-winning Chord Company C-series range of cables.

The new, ultra slim and flexible Chord Company C-view HDMI cable. Designed for high performance and easy installation at an affordable price.

Available now in 0.75m, 1.5m, 2m, 3m, 5m, 8m, 10m lengths. Prices from £35.00 (UK RRP)

Designed in England by The Chord Company Ltd, Millsway Centre, Amesbury SP4 7RX, UK. For full technical specifications and to find your nearest retailer, please call us on: +44 (0)1980 625700 or visit:

www.chord.co.uk

NEW
C-view
HDMI cable

THE
CHORDTM
COMPANY

Ultra HD without an ultra high price

Four affordable 55in/58in 4K TVs try to prove to **John Archer** that you don't have to spend a fortune to get next-gen picture quality

QUICK AS A...

More smallscreen heroics from *The Flash* arrive on Blu-ray p100



PANASONIC TX-55DX650

Can a 4K TV without HDR playback still impress?

PANASONIC TX-58DX700

Second Panasonic entrant ups the screen size and specs

PHILIPS 55PUS7101

55-incher mixes Android TV with Ambilight illumination

SAMSUNG UE55KS7000

The most expensive set here, so the pressure's on!

Panasonic TX-55DX650

This entry-level model ignores HDR but still finds the detail in 4K sources



PANASONIC HAS PUSHED the UHD price envelope this year, from its highest-spec DX902 models right down to its entry-level sets – the exclusive-to-Currys 55DX650, a TV from the lower reaches of Panasonic's current 4K range, can currently be yours for just £750. As expected, though, this price comes with a few strings attached.

It's design is not one of them, though. In fact, aside from being rather chunky around the back, it cuts a pretty dashing figure thanks to its deep grey colour and swish see-through upper layer combination, plus a pair of desktop feet that can be mounted in different ways to create either a circular or angular effect.

The 55DX650's connections are respectable, with highlights of three HDMI, two USBs and integrated Wi-Fi. The Wi-Fi can be used for streaming from connected devices or accessing Panasonic's online services via the Firefox-for-TV operating system.

Services available include 4K-ready versions of Netflix and Amazon, plus the catch-up platforms of the BBC, ITV, Channel 4 and Channel 5. These catch-up services are provided via Freeview Play, meaning you can search for and access on-demand content through an electronic programme guide that scrolls seven days back through time as well as forwards.

So far, so good. Things take a turn for the worse, though, when you sit down to watch

the UHD BD of *The Revenant* on Panasonic's budget set...

The problem is that whenever there's a dark scene, such as the one where Hugh Glass is rediscovered by his ex-colleagues after his epic journey, a drastic shortage of black level depth makes it immediately clear that you're watching an IPS type of panel.

IPS panels support slightly wider viewing angles than the rival VA panel type before colour and contrast take a hit. But their design also means they struggle to deliver a deep black colour – somewhat of an irritant for film fans, especially in these days of high dynamic range video.

Actually, though, the 55DX650 is the only TV in this group that doesn't support HDR. Perhaps it's as well that it doesn't, as the inability to deliver a good black colour obvious with standard dynamic range sources would merely be exaggerated by HDR's more demanding brightness criteria.

The 55DX650's backlight setting can be reduced, and its adaptive contrast mode set to its highest level, to improve the handling of *The Revenant*'s dark scenes, but this leaves the picture looking muted, flat and slightly unstable.

In other regards the 55DX650 does perfectly well. Colours appear natural, reasonably rich and subtle enough to underline the screen's native UHD resolution.

Clearly Panasonic's ever-impressive colour processing has filtered down even to here.

Action scenes enjoy reasonably clean, natural motion reproduction that doesn't need the help of the TV's motion processing, and detail levels are pretty good, except for when the set's contrast issues lead to some picture info disappearing amidst dark areas. The 55DX650 clearly upscales HD sources and its speakers partner its pictures with a strong performance, thanks in particular to a decent amount of bass, and good treble detailing.

Overall, though, the 55DX650's cinematic appeal is defined by its contrast shortcomings.

SPECIFICATIONS

3D: No **4K:** Yes, 3,840 x 2,160

HDR: No **TUNER:** Yes, Freeview HD

CONNECTIONS: 3 x HDMI inputs; 2 x USB; RF input; Ethernet port; component input; composite input; optical audio jack; headphone jack; Wi-Fi

SOUND: 20W **BRIGHTNESS (CLAIMED):** N/A

CONTRAST RATIO (CLAIMED): N/A

DIMENSIONS (OFF STAND): 723(h) x 1,244(w) x 69(d)mm **WEIGHT (OFF STAND):** 18kg

FEATURES: Firefox OS smart features; '1,000Hz' motion processing; noise reduction; screen mirroring support; Freeview Play catchup platform; DLNA/USB file playback

Panasonic TX-58DX700

Step up a notch to get a larger display, wider format support and a better performance



SITTING ONE RUNG higher up Panasonic's 2016 TV range than the disappointing 55DX650 but still (following recent price cuts) cruising under the key £1,000 barrier, the 58in TX-58DX700 is a more satisfying proposition than its cheaper sibling.

The TV gets off to a good start with its bright, breezy design based around a super-thin silver screen frame and a pair of thin feet that face directly towards the viewer and are barely noticeable from your viewing position.

Like the 55DX650, the 58DX700 carries three HDMI inputs and built-in Wi-Fi. It also adds a third USB for multimedia playback or recording from the Freeview HD tuner.

The screen uses an edge LED lighting system – not, for me, the best lighting solution for HDR playback. However, unlike the 55DX650, the 58DX700 uses a contrast-rich VA LCD panel rather than an IPS one, and supports local dimming, where different zones of the edge LED lighting can output different amounts of light according to the demands of the image being shown.

A further difference between the two Panasonic TV is this model's support for 3D playback.

A tale of two formats

The 58DX700 offers a mixed performance: great with standard dynamic range (SDR), not so great with high dynamic range (HDR).

Running *The Revenant* in UHD SDR from Sky Q, the TV gives an excellent account of itself. Detail levels appear high – especially as some exceptional colour finesse helps to unlock the potential of the screen's 3,840 x 2,160 pixel count during highly textured and subtly coloured sequences.

The film's snowy wastelands, meanwhile, enjoy plenty of raw punch from impressive amounts of brightness by lower mid-range TV standards. This doesn't stop dark scenes enjoying a rich, convincing black colour courtesy of the VA panel and some efficient light control from the local dimming system.

Switching to the HD Blu-ray of *The Revenant*, the 58DX700 joins the DX650 series in benefitting from strong 4K upscaling, which adds a sense of sharpness and detail without exaggerating noise.

The audio performance is fairly strong, too, layering a subtle rendering of the wild environment with robust handling of the score and plenty of FX detail.

HDR material, however, leaves this 58-incher a bit exposed. For starters, when bright objects appear against dark backdrops – torches at night near the end of *The Revenant* – the objects are accompanied by clear, luminous haloes or bands of light.

Also, with Panasonic's Adaptive Contrast system in play – necessary to enjoy a satisfying black level and rich colours –

SPECIFICATIONS

3D: Yes **4K:** Yes, 3,840 x 2,160

HDR: Yes. HDR 10 **TUNER:** Yes. Freeview HD

CONNECTIONS: 3 x HDMI inputs; 3 x USB; RF input; Ethernet port; component input; composite input; optical audio jack; headphone jack; Wi-Fi

SOUND: 20W **BRIGHTNESS (CLAIMED):** N/A

CONTRAST RATIO (CLAIMED): N/A

DIMENSIONS (OFF STAND): 723(h) x 1,290(w) x 41(d)mm

WEIGHT (OFF STAND): 23kg

FEATURES: Firefox OS smart features; '1,400Hz' motion processing; noise reduction; screen mirroring support; Freeview Play catchup platform; DLNA/USB playback

the picture's underlying brightness level tends to jump about quite aggressively.

The 58DX700 is capable of pumping out a decent amount of brightness, however, which helps it express HDR's highlights and detail in the brightest areas. And it makes a good stab at rendering the wider colour gamuts associated with HDR sources. It lacks the talent of truly high-end HDR TVs, but you certainly get a degree of uplift.

That said, the 58DX700 is best considered a good SDR Ultra HD TV. This may be enough to win the set a fan base given its aggressive price. Just don't expect HDR miracles.

Philips 55PUS7101

This HDR-enabled Ambilight TV has its strengths, but weaknesses too



THE PHILIPS 55PUS7101 knows how to make an entrance. The sleek metallic frame with a three-sided take on Philips' Ambilight technology (where LEDs throw coloured light from the TV's edges that can match the colour content of onscreen images) looks gorgeous, and much more opulent than you'd expect from a £1,000 55in 4K TV.

Following a recent firmware update the 55PUS7101 now plays HDR as well as 4K sources. There's no 3D support, though; Philips has joined Samsung this year in putting 3D out to pasture.

The operating system combines Philips' rather complicated own setup menus with Google's Android TV platform. I'm still not a big Android fan, but there's no doubt the platform helps Philips deliver far more apps than it was able to do in previous years via its own in-house team.

That said, while Netflix and Amazon 4K apps are both present now, at the time of writing the BBC iPlayer is the only one of the 'big four' catchup services available.

The Pixel Precise UHD processing engine here is not Philips' most powerful effort, but it extends its tendrils into pretty much every element of TV picture quality. It can be heavy handed, though – experiment with all the motion/colour/contrast/sharpness/noise reduction options to find the balance that looks most natural to you.

Yet the sad reality is that nothing you do to the 55PUS7101's pictures will make them much cop. This is because it not only uses the same sort of low-contrast IPS panel technology that the Panasonic 55DX650 does, it swaps that TV's direct LED lighting for a less-precise edge LED system.

The result, predictably, is that *The Revenant*'s dark scenes are badly affected by low-contrast grey mist/clouding. The set can't deliver anything approaching a deep black colour, meaning dark shots never look natural and force you to squint to spot the action through the TV's light pollution.

This unsatisfactory situation applies even when you're watching *The Revenant* in SDR dynamic range (either Blu-ray or in Ultra HD on Sky Q). Switch to the HDR version on Ultra HD Blu-ray and the backlight situation becomes even more dire, due to the TV having to run its LEDs aggressively to cope with HDR's luminance. The grey wash to dark scenes also impacts its handling of muted colours, stopping them from looking naturally toned.

Crisp delivery

These contrast woes pretty much crush the TV's chances in this group test from the off. Which is a shame, as in other areas Philips' customary picture strengths are still apparent. UHD pictures look crisp and detailed for the most part (though fast motion can look a bit

SPECIFICATIONS

3D: No **4K:** Yes, 3,840 x 2,160

HDR: Yes, HDR 10

TUNER: Yes, Freeview HD

CONNECTIONS: 4 x HDMI inputs; 3 x USB; RF input; Ethernet port; component input; composite input; optical audio jack; Scart; headphone jack; Wi-Fi

SOUND: 30W **BRIGHTNESS (CLAIMED):** N/A

CONTRAST RATIO (CLAIMED): N/A

DIMENSIONS (OFF STAND): 723(h) x 1,233(w) x 62(d)mm **WEIGHT (OFF STAND):** 18.7kg

FEATURES: Android TV smart features; '2,000Hz' motion processing; Pixel Precise Ultra HD picture processing; noise reduction; HDR upscaling

blurry), and HD pictures are displayed with an unusual amount of sharpness and texture.

Bright, snowy backdrops in *The Revenant* ping impressively and the set cranks out punchy, dramatic colours too. There's lots of tonal subtlety and detail in these bright colours by mid-range HDR TV standards.

Your immersion in Glass's incredible tale of survival is further bolstered by Ambilight, along with a reasonably potent speaker system tucked into the slim design.

A middling TV, then, and one that's out-gunned by its rivals here and Philips' own direct-lit PUS7601 (see HCC #263).



"Ultimate Range" of Tab Tensioned In-ceiling Screens

**SSP from
Only £1,416.00**

For when only the best will do ...



**5 Year
Warranty**

Imagine if

- * You had a screen that was almost invisible to visitors until in use. When you finish viewing the trap door closes magically to hide the fabric.
- * If the motor and the structure was designed to be whisper quiet.
- * If the screen was able to drop down automatically when you turn on your projector.
- * If the fabric was one of the best in the business for 4K projection giving vibrant colour with a perfectly flat soft tensioned surface.
- * If the product had a 5 year comprehensive warranty.

***Dreams are now
reality!***

Available for next day delivery
from many quality retailers and
distributors in UK and Ireland

www.sapphireav.com

QR
Code



SOLAR
YELLOW

FROST
WHITE

LAGOON
BLUE

GUN METAL
GREY

VERMILION
RED

ARTISAN
BLUE

COAL
BLACK

*Exceptional
Detailing*



Exquisite design



***Not the case here - Steljes
Audio sound as good as
they look!***



*Crystal Clear Sound
with Bluetooth on all products*

3 Year Warranty

www.steljesaudio.co.uk

QR
Code



Premier Group (UK) Ltd - Home of
Sapphire, ConxEasy and Steljes Audio

Samsung UE55KS7000

This screen's performance is likely to make you try and up your budget to meet its ticket



AS THE MOST expensive TV in this group test by £300, Samsung's UE55KS7000 (mid-range in its 2016 lineup) absolutely has to deliver the goods with HDR and SDR content better than any of its rivals.

Hoping to make this possible is the fact that the UE55KS7000 clings on to the brand's 'SUHD' designation despite being one of its most affordable TVs. This means it delivers both Quantum Dot colour technology and an ultra-bright VA type panel, features which have proved key in producing outstanding HDR pictures in other Samsung TVs.

The promising tech is housed in a slim black-and-silver frame mounted on a gleaming pair of spindly feet. Connections include a quartet of HDMI inputs, three USBs and built-in Wi-Fi, as well as tuner inputs for both Freesat and Freeview HD.

Via the Tizen smart platform, Amazon and Netflix are both available in their 4K and HDR incarnations, and Samsung suggests all the UK catchup services should be available eventually. I can't help think it would be a good idea if Samsung followed the lead of many of its challengers and got YouView or Freeview Play onboard, though.

With the Ultra HD Blu-ray of *The Revenant* in all its 4K and HDR glory, this TV proves to be a class apart from its rivals.

It's immediately obvious that it does much better at showing off the bright peaks

and details so key to a successful HDR experience. Light reflecting off the rippling water as Glass stalks a deer, or sparks floating into the night sky from a camp fire, both look intense and vivid.

What's more, *The Revenant*'s endless naturally-lit outdoor sequences all look gorgeously life-like in HDR thanks to the TV's peak 1,000 nit capability.

Samsung's QD display, meanwhile, crafts eye-catching colours and captures the subtle shifts in hue in more restrained areas. Skin tones and the flora and fauna of the great American wilderness look superb.

The most surprising strength of the UE55KS7000 is its handling of very respectable black colours alongside its bold whites and vivid hues. The overall dynamic range isn't as wide as on the KS9500 reviewed elsewhere in this issue, but as a positive, the reduced dynamism means the TV's locally-dimmed edge LED system has less obstacles to overcome.

The bottom line is that no other TV here makes HDR look as enjoyable. This is a pretty major advantage. Furthermore, Samsung's HDR upscaling system gives at least a sense of HDR's brightness and colour expansion with standard dynamic range sources.

Striping issues occasionally obvious with HDR fade almost completely away with regular material. The set's expanded colour

range makes light work of SDR's more limited palette, revealing the blends and colour detail of *The Revenant*'s vistas.

Detail levels with the 4K versions of the Oscar-winning film are extreme (except for when they're reduced by heavy judder during rapid camera pans) and 4K upscaling is outstanding. As the icing on the cake, the UE55KS7000's speakers put in a good show, sounding convincing with dialogue and well-balanced.

This is, then, a great all-round package. It's perhaps more than you're hoping to spend on a UHD TV, but undeniably worth the extra outlay.

SPECIFICATIONS

3D: No **4K:** Yes. 3,840 x 2,160

HDR: Yes. HDR 10

TUNER: Yes. Freeview HD; Freesat

CONNECTIONS: 4 x HDMI inputs; 3 x USB; RF input; Ethernet port; component input; composite input; optical audio jack; headphone jack; Wi-Fi

SOUND: 40W **BRIGHTNESS (CLAIMED):** 1,000 nits (peak) **CONTRAST RATIO (CLAIMED):** N/A

DIMENSIONS (OFF STAND): 710(h) x 1,225(w) x 44.3(d)mm **WEIGHT (OFF STAND):** 17.2kg

FEATURES: Tizen-based smart TV system; Dolby Digital Plus; 2100 PQL; screen mirroring, HDR+ remastering; edge LED lighting with local dimming

Final standings

AS THE UHD TV market grows and manufacturers turn out more and more screens, prices are starting to plummet. You can get a bigscreen 4K TV now for the same money a decent HD TV would have set you back only two years ago. But what performance price do you pay for buying a 4K TV from the lower half of the market? This group test suggests not as much as you might think, as long as you're careful about what you buy.

Putting the four contenders here into some sort of order is easier than usual. This is partly because two models, the Panasonic TX-55DX650 and Philips 55PUS7101, struggle when it comes to contrast and fall short of the other two. The problem is particularly stark on the Philips, meaning that – even though it supports HDR and the 55DX650 doesn't – it brings up the rear in this roundup.

Second place goes to Panasonic's 58DX750. This TV is excellent with standard dynamic range sources and features a brilliantly easy-to-use smart TV system. HDR imagery, while exhibiting some flaws, is enjoyable too. It's excellent value at £900.

In top place is Samsung's UE55KS7000. This is probably expected, given its £1,300 price tag. Yet the margin of its victory goes further than the price difference; it turns in a genuinely impressive HDR image alongside its UHD resolution thrills. In other words, as well as being the best performing TV in this group test it's also the most futureproof – and given the turmoil in the TV world right now, that counts for a lot ■



HCC VERDICT

Samsung UE55KS7000
→ £1,300 → www.samsung.co.uk



Panasonic TX-58DX700
→ £900 → www.panasonic.co.uk



Philips 55PUS7101
→ £1,000 → www.philips.co.uk



Panasonic TX-55DX650
→ £750 → www.panasonic.co.uk



HOME CINEMA Choice



Great Savings when you **subscribe** to *Home Cinema Choice* online...



DIGITAL SUBSCRIPTION

Download each new issue to your device

Access your subscription on **multiple devices**

Access to the Online Archive dating back to August 2011

Makes an **ideal gift**

SUBSCRIBE TODAY

For our latest subscription offers **see page 18** or visit **homecinemachoice.com**

Please visit www.homecinemachoice.com for full terms & conditions

Cash-saving PJ

John Archer knows that a £300 projector is going to cut a few corners, but he's still impressed by the image quality at the heart of Optoma's budget H183X



USUALLY, £300 DOESN'T get you very far in the projector world. The Optoma H183X, though, is anything but 'usual'. Despite limbo-ing just under the £300 price bar, it delivers pictures that really could scratch at least a casual home cinema itch.

From a distance the H183X looks its money. The chassis shape is a bog-standard rectangle, the finish is a pretty dull black, and the grilled sides make it look industrial to say the least. It does feel promisingly heavyweight when you move it, though.

There's more sign of price-induced compromise with the H183X's connections, which only include one HDMI, although Optoma does offer an optional wireless HDMI video streaming kit, the WHD200. And the H183X does feature a 3.5mm audio loopthrough, reflecting that it has a 2W (2W!) speaker to aid its 'plug-n-play' credentials.

Ease of setup is hindered by a very limited 1.1x optical zoom, and the lack of any vertical picture shifting tools. This means many users will have to use image-distorting keystone adjustment to straighten the image's sides.

The H183X is better equipped with image

calibration aids, as colour, contrast and gamma management systems are all present and correct. There are even two dynamic lamp output options, which adjust the light level in response to the image content.

Dazzling DLP

The H183X's most startling specification is a claimed brightness of 3,200 Lumens. This is a huge figure for such a budget projector – and one which helps it deliver images that retain startling amounts of colour and brightness even if your room contains hefty dollops of ambient light. This is great news if you plan to use it for Saturday lunchtime football screenings.

And there's good news for more serious cinema fans too. For instance, the H183X's colours look natural during a run-through of *Spectre* on Blu-ray, even during the tricky, heavily-filtered 'festival of the dead' sequence, and during dark scenes like Bond's infiltration of the 'board meeting'. The projector has clearly been tuned for video rather than presentational use – unusual for its price point.

The Optoma also exceeds expectations with its sharpness. Despite only enjoying an HD resolution of 1,280 x 800, the H183X reproduces detail levels in *Spectre* scenes like Bond's arrival by train in the desert with impressive clarity and punch. Black levels still look quite believable during the dark meeting and ensuing night-time car chase sequence

SPECIFICATIONS

3D: Yes. Active

4K: No. 1,200 x 800 resolution

CONNECTIONS: HDMI input; composite video input; 3.5mm audio loopthrough; RS232; VGA input

BRIGHTNESS (CLAIMED): 3,200 Lumens

CONTRAST (CLAIMED): 25,000:1

DIMENSIONS: 298(w) x 96.5(h) x 230(d)mm

WEIGHT: 2.17kg

FEATURES: Single-chip DLP projector; built-in 2W speaker; 8,000-hour claimed maximum lamp life; two dynamic iris modes; 1.1x optical zoom; colour and gamma management; Brilliant Colour

The projector is 3D capable, but you'll need to spend extra to get the active shutter spex

– provided, at least, you use one of the dynamic contrast modes.

Inevitably you have to accept some compromises for the money. Very bright areas can flare out alarmingly, for instance, unless you reduce the projector's Brilliant Colour setting to its low setting (this isn't necessarily a bad thing anyway).

Next, contrast is much less impressive if you don't use one of the two dynamic modes, meaning you have to accept some occasional brightness instability during darker scenes.

The need to downscale *Spectre* to a sub-1,920 x 1,080 resolution results in some slight jaggedness over curved edges, as well as low-level fizzing noise over skin tones. Finally, high-contrast images, like the climactic night-time helicopter flight, sometimes show signs of the 'rainbow effect' striping that can affect single-chip DLP projectors.

The H183X's 2W speaker is best described as 'functional'. Certainly, it's far too limited in power and range to do *Spectre*'s action sequences justice, so while it passes muster for sport commentaries and basic stadium effects, film fans will need to factor in an external audio setup.

Quick-fire home cinema

The H183X is not a showstopper, then – but it was never going to be for £300. Optoma's bargain beamer does, however, function as an accomplished movie machine, and offers tweaking flexibility to let you fine-tune its visuals. Most buyers won't bother, of course: this is quick-fire home cinema. A little rough around the edges, but a good effort ■

AV INFO

PRODUCT: Affordable, HD Ready DLP projector

POSITION: Pretty low down Optoma's extensive projector range

PEERS: BenQ W1070; Optoma HD26; Epson EB-U04

HCC VERDICT



Optoma H183X

→ £300 → www.optoma.co.uk

WE SAY: While there are inevitably limits to what the £300 H183X can do, it's far more video-friendly and flexible than expected.

Subbed off!

Martin Pipe doesn't worry about the lack of a subwoofer with Roth Audio's Sub Zero III soundbar, but is a fulsome bass performance all that matters when it comes to movies?



The LCD display keeps you abreast of source and DSP

SOUNDBARS FILL THE gap between the mediocre sound systems built into many TV sets and fully-blown AV systems. And even if you prefer to unleash the full potential of movie soundtracks with the latter, a soundbar may still benefit casual viewing thanks to its ease of use.

The Sub Zero III, from British speaker brand Roth Audio, is from the more affordable end of the market, available to buy for around £150. It's named Sub Zero because – unlike plenty of other soundbars – it doesn't ship with a separate subwoofer. Instead, augmenting the 2.75in woofer of each of its stereo channels is an auxiliary bass radiator (ABR). This is a passive cone, the output of which is in phase with the driver. The ABRs are rectangular, measuring around 5in diagonally.

Naturally the drive units, which can draw on a claimed 90W of peak Class D power, are arranged horizontally. To maximise stereo separation, the 2.75in midrange/treble drivers lurk at the opposite ends of an enclosure that's 85cm wide, making it a fair match for 40in and above screens. Wall fixings are supplied to mount the 'bar

underneath your TV. It can also be placed on a table, but there's insufficient depth for your HDMI plugs to sit flush. To counter this, Roth provides a right-angle adaptor – two would be nice, as the Sub Zero III has two HDMI inputs, plus one output, in addition to Bluetooth for smart-device streaming, optical digital and 3.5mm analogue audio ins.

The output HDMI features ARC, so you'll be able to enjoy off-air sound through the Sub Zero III without the need for extra cabling, if your display supports it.

There's no HDMI 'standby bypass' function, meaning you won't get pictures from your source when the unit isn't powered on; ideally, the last-selected HDMI source would be passed to the output intact.

Furthermore, the Roth Sub Zero III won't accept surround bitstreams from a Blu-ray player or set-top box via HDMI; you'll need to configure your source for PCM output. There's no means of correcting lip-sync issues either. Still, at least sources (together with standby, volume/mute adjustment and audio DSP mode) can be changed with a bundled remote, as well as from the soundbar's front panel, with its LCD screen and simple controls.

One bar, two channels

The Sub Zero III is purely stereo. Virtual surround modes for movies aren't part of its armoury, which is a mite disappointing

SPECIFICATIONS

DRIVE UNITS: 2 x 2.75in woofers; 2 x 5in ABRs; 2 x 2.75in midrange/tweeters
AMPLIFICATION: 90W (peak) Class D
CONNECTIONS: 2 x HDMI inputs (v1.4); 1 x HDMI output (v1.4); optical digital audio input; 3.5mm analogue audio input; Bluetooth with aptX
DOLBY TRUEHD/DTS-HD MA: No
SEPARATE SUB: No
REMOTE CONTROL: Yes
DIMENSIONS: 850(w) x 88(h) x 80(d)mm
WEIGHT: 3kg
FEATURES: Wall-mountable; Movie/Music/Voice sound modes; LCD display (automatic dim function); optical input accepts up to 24/96; auto 'no-signal' standby

given the manual's sprinkling of quotes from the directorial likes of Francis Ford Coppola, John Huston and Stanley Kubrick. There are three of the aforementioned DSPs – fixed presets optimised for Movie, Music and Voice – but their effects are tonal, with little impact on imaging.

And imaging is perhaps the biggest let-down of this bargain 'bar. Play *Star Wars: The Empire Strikes Back* (Blu-ray) through the unit in Movie mode, and – certainly compared to real home cinema – there's little spatial correlation between what's onscreen and what you're hearing. As the Millennium Falcon tears away from the firepower of an Imperial star destroyer, there's a narrowness to the presentation. That said, it's a noticeable improvement over an average TV's audio.

In other regards, the difference is vast. There's plenty of unstressed volume (in a 10ft x 12ft room) and a phenomenal bass-response yields palpable depth. Janis Joplin's Woodstock performance, part of a BBC Four documentary, features prominent bass guitar. Here, it gets a throb that belies the unit's dimensions – the raw energy of the singer's voice carries well, too. Various tracks streamed via Bluetooth reinforce that full-bodied musical impression. Sure, it's not hi-fi – judged by that yardstick, there's a tad too much low-midrange colouration and treble brashness – but it's easy to live with nevertheless.

At this price point many competitors ignore HDMI altogether or offer a meagre single hookup, so Roth deserves applause for the Sub Zero III's double input, and the way it's engineered a bass-rich performance without recourse to a separate sub. Overall this is solid, but not spectacular ■

AV INFO

PRODUCT: Stereo soundbar with HDMI switching

POSITION: The third-generation of Roth's Sub Zero

PEERS: Bose Solo 5; Samsung HW-K450

HCC VERDICT



Roth Audio Sub Zero III

→ £150 → www.rothaudio.co.uk

WE SAY: This affordable soundbar is easy to use and gives you a deep and full-bodied sound, but it lacks a little stereo separation and scale.



Just a few of our recent accolades



Best Home Cinema Over £100k **Highly Commended** 2013
 Best Home Cinema £40k-100k **Highly Commended** 2015
 Best Home Cinema under £40,000 **Winner** 2011, 2015



Best Home Cinema **Winner** 2014
 Most Professional AV Rack **Winner** 2014
 Dealer of the Year **Winner** 2014
 Best Lighting Project **Winner** 2015



Best Home Cinema **Winner** 2015
 Most Outstanding Entry Winner's **Winner** 2015



Home
Acoustics
Alliance
Certified



Imaging
Science
Foundation
Certified



Home Cinema Excellence

At The Big Picture, we specialise in crafting bespoke installations of high-quality audio-visual and home automation equipment.

As one of only a handful of established UK companies offering a full service from start to finish, we take complete responsibility for every aspect of your project, from design to installation. The products we provide are at the forefront of audio-visual design and innovation - this is at the heart of all we do.

Our multi-award-winning experts and engineers pride themselves on their impeccable attention to detail and appreciation of aesthetics. With over a decade of experience, you can trust us to provide excellence in your home.

Call 01922 623000



@bigpictureci / www.getthebigpicture.co.uk





Full-frame film fan

Can the huge brightness and short-throw lens of this Acer 'large venue' projector satisfy **John Archer**'s bigscreen desires and make him overlook its old-school 4:3 ratio?

IN SOME WAYS the Acer P6200S is not the sort of projector we'd usually feature in the pages of *HCC*. Its 4:3 native aspect ratio and huge brightness output claim of 5,000 Lumens both make it look more like a business projector than a home entertainment model. However, Acer pitched its new single-chip DLP device to us very much as a potential home cinema machine, pointing out that its extreme brightness, trio of HDMI inputs, short-throw lens and high claimed contrast ratio of 20,000:1 could make it an ideal movie candidate for big and/or bright rooms.

There's a 'living room' look to the P6200S, too. The design is a pleasing amalgamation of gloss-black chassis, stylish lines and silvery detailing. It's quite large and heavy by living room projector standards, but this ought to point to some quality innards and a decent ventilation system for that high-brightness lamp.

Unusually, the P6200S supports wireless projection from Windows, Android or iOS devices using an integrated eDisplay app and optional (£70 or so) wireless adaptor, while setup is aided by a respectable 1.4x optical zoom and simple vertical image-shifting wheel.

Some readers will be pleased to hear the P6200S also supports active 3D playback (though it doesn't ship with any free glasses), and that it provides an Eco mode that

reduces the lamp output to decrease power usage by as much as 90 per cent, as well as reducing running noise from a rowdy 33dB to a better – though hardly class-leading – 28dB.

Other key features of the P6200S are a 10W built-in speaker to aid plug-and-play, and a solid set of picture setup tools that includes a basic colour management system. Accessing these features, however, forces you into confronting the P6200S's horrible remote control. With its tortuous button layout, plasticky finish and unresponsive keys this is pretty much an exercise in how not to do a projector remote.

Heading for Oblivion

Given its apparent bright-room capabilities, I started my audition of the Acer P6200S with some lighting still on, and with a combination of *Oblivion* on Full HD Blu-ray and football broadcasts from Sky Q.

The football footage instantly impressed, as the projector's high brightness punches through the ambient light to leave the sporting action looking more watchable in both colour and brightness terms than on any other recent 'ambient light' projector I've seen.

The projector's brightness means, too, that you can blow the image up larger than you can with most budget

AV INFO

PRODUCT:
High-brightness
single-chip DLP PJ

POSITION:
Around the middle
of Acer's 'large
venue' range

PEERS:
BenQ W2000;
Epson EH-TW6600;
Optoma HD27

living room beamers. This is handy with the P6200S as it lets you zoom the large black borders the projector's 4:3-ratio DLP chipset creates with today's 16:9 video sources off the edges of your screen.

The Acer P6200S also handles motion well, and its built-in speaker goes louder and retains more clarity than most, further boosting the projector's sports/action movie credentials. Pictures look reasonably sharp and clean, too, considering it's not a native 1,920 x 1,080 resolution device (the pixel count is 1,024 x 768).

There are, though, limits to the P6200S's bright-room appeal. First, I was regularly distracted by single-chip DLP's rainbow effect, where you see fleeting stripes of pure red, green and blue appearing over the image.

This issue was most noticeable during relatively dark *Oblivion* scenes, like those on the alien ship, but sometimes manifested over highlight areas of the predominantly bright football coverage, too. *Oblivion*'s murky interiors also remind that while the P6200S might be effective at countering ambient light, it can't stop dark movie scenes looking greyed-over and detail-lite in such room conditions.

Another problem is that the very brightest parts of the picture – the skies around Tom Cruise's home in *Oblivion*, for instance – seem to glow at times, as well as lacking tonal subtlety.

'Activating the Dynamic Black setting to encourage a superior black level creates a winning first impression'

The 4:3 resolution also causes an issue. By the time you've zoomed the image up to a point where widescreen images are engagingly large, you can spot the DLP chip's pixel structure in the picture, as well as jaggedness around contours and angles.

Calling in the black ops team

Darkening my test room for more serious movie viewing and activating the projector's Dynamic Black setting to encourage a superior black level performance creates a surprisingly winning first impression. There's less greyness than I'd was expecting. Over the famously dark *Oblivion* shot where Morgan Freeman first introduces



SPECIFICATIONS

3D: Yes. Active (glasses optional) **4K:** No. 1,024 x 768 resolution
CONNECTIONS: 3 x HDMI inputs; USB; composite video; component video; Ethernet; VGA input; VGA output; 3.5mm audio input; 3.5mm audio output
BRIGHTNESS (CLAIMED): 5,000 Lumens **CONTRAST (CLAIMED):** 20,000:1
ZOOM: 1.4x optical **DIMENSIONS:** 369(w) x 116(h) x 294(d)mm **WEIGHT:** 4.5kg

FEATURES: Single-chip DLP projector; built-in 10W audio; 3,000-5,000 hour lamp-life depending on picture mode; 28-33dB fan noise depending on usage mode; dynamic contrast option; 1.4-1.91:1 throw ratio; vertical keystone correction; 4:3 native aspect ratio; 1m minimum projection distance; Acer eDisplay app (Windows/Mac/Android/iOS)

PARTNER WITH



ACER MWA3: This £70 MHL HDMI adaptor hooks into the P6200S and allows connection of smart devices/laptops/PCs to the PJ via Wi-Fi. File playback includes 1080p content, and Miracast screen mirroring is an option, too.

himself to a baffled Tom Cruise, the image had a good, inky black feel. And the bright parts of this sequence still look punchy, detail levels remain high despite the visible pixel structure, and motion handling continues to please with 24p content.

Colours have vigour, but they don't look particularly natural. Skin tones appear a mixture of peaky and ashen, and *Oblivion*'s bright skies look strangely raw – as well as suffering even more obviously with the glowing problem noted earlier. These areas now contain pretty heavy amounts of fizzing noise, too.

It also becomes clear that while black levels look good, the trade off is that dark picture areas frequently come through bereft of shadow detail.

The rainbow effect remains in evidence despite the reduced overall brightness you get with the Dynamic Black mode in play. There are marked shifts in the PJ's running noise as the automated lighting system responds to stark shifts in light level.

Good for certain games

The Acer P6200S's brightness potentially makes it a handy gaming display, and it backs this up with a solid input lag measurement of around 36ms. However, while a few games might be consistently bright and colourful enough to look good here, many others feature intensely dark sequences that you'll struggle to see your way through, however you light your room.

This curious projector therefore ultimately fails to impress as an all-round home entertainment machine. Performance never really hits high notes in either bright- or dark-room environments. The simple truth is that there are better-performing home cinema PJs available for much less money ■

1. The Acer offers a native 1,024 x 768 4:3 resolution

2. The varied connections panel denotes this PJ's multimedia chops

HCC VERDICT



Acer P6200S

→ £1,050 → www.acer.co.uk

WE SAY: Despite extreme brightness and some handy home entertainment features, the P6200S is too flawed in both dark- and bright-room scenarios to justify its price

A DAB hand

This radio introduces **Mark Craven** to a multiroom audio system from a familiar brand, and sees FM/DAB radio clinging on alongside Spotify and wireless streaming



WITH ITS R Line series, long-running UK radio marque Roberts is entering the multiroom arena. And it's not just focusing on standard speakers – the series features a soundbar model, the SB1, to please AV fans. But with that not yet come to market, here we're looking at its R100, an interesting speaker that combines modern multiroom streaming tricks with more traditional DAB and FM radio.

'Traditional' is also a word that's relevant to the R100's design. While the speaker appears to take some cues from market bigwig Sonos – especially the silvery grille – the brown leather carry handle is more in keeping with

Roberts' heritage. Don't think the handle denotes this radio is portable, though. It needs to be plugged in to work, unless you spend extra (£40 in addition to the £250 base price) on a battery pack.

Bass box

The driver array is two tweeters and a single

midbass unit. From the get-go, performance is a little uninspiring. The default sound mode (Normal) is bass-skewed to the point where its presentation feels a bit muffled. This is more apparent with genuine music material as opposed to voice-heavy radio broadcasts. It's as if the R100 has been tuned with talk radio in mind.

Thankfully, an EQ mode lets you fine-tune, to an extent. Only bass and treble adjustments are offered, but you can experiment with these to remove some of that bottom-heavy sound and then save settings for recall later. Alternatively, there are other presets to use, including one that – confusingly for an audio device – is named 'Movie'.

Going loud enough for the kind of environments the R100 will find itself in isn't a problem, although trebles can become grating at higher volumes. There's a lack of balance across the frequency range, too, and bass never sounds pleasingly rich and inviting.

Naturally, it fares better with higher-quality sources. It's ruthlessly unforgiving of low-bitrate 'net radio stations (which also have an annoying habit of streaming at wildly different volumes); having grown used to 'net radio via an AVR with compressed restoration

SPECIFICATIONS

DRIVERS: 2 x tweeters; 1 x midbass driver

AMPLIFICATION (CLAIMED): N/A

CONNECTIONS: 3.5mm stereo analogue line input; 3.5mm headphone output; Ethernet; USB

REMOTE CONTROL: No – app instead

DIMENSIONS: 160(h) x 240(w) x 130(d)mm

WEIGHT: 1.6kg

FEATURES: Built-in dual-band Wi-Fi; Bluetooth; Spotify Connect; internet radio; DAB/FM radio; USB and networked music playback; optional battery pack; Undok app control; multiroom ready; six EQ presets plus user EQ setting; full-colour screen; carry handle; on-device controls

Spend £40 on an optional battery pack to go portable

tech, hearing its poor quality unfettered is alarming. Streamed ALAC files benefit from more clarity.

It's not a top-class standalone speaker, then, but the appeal of the Roberts also lies in its functionality. There are plenty of source options here, including Spotify Connect, Bluetooth, USB, DLNA-connected devices and those hardwired via 3.5mm.

Picking your way through all this choice can be done via the radio's top-mounted control buttons and colour (but not touch) display, although the latter is a bit basic-looking, and not always intuitive. Swifter and easier control comes from a free iOS/Android app, named Undok.

This isn't a proprietary Roberts invention – Undok, developed by Frontier Silicon, is a brand-agnostic multiroom controller, and it works fairly well. With the R100 joined to my Wi-Fi network, as soon as I opened the app it located the radio and made the connection. With another member of the R Line in another room – the £180 R1, essentially the R100 without the DAB/FM feature or LCD display – it was easy with Undok to setup a multiroom system and then browse sources. It wasn't foolproof, with the app connection dropping occasionally, but the UI is bright and breezy. Very quickly I was using the app almost exclusively.

If you prefer the streamlined DAB radio selection to the Wild West of 'net radio, and want a speaker with plenty of source choice that opens up multiroom possibilities, this is worth consideration. Sound quality isn't its biggest draw, though – it'll be interesting to see how Roberts' incoming soundbar performs ■

AV INFO

PRODUCT:
DAB/network/
Bluetooth speaker
with multiroom

POSITION:
One of five R Line
speakers

PEERS:
Sonos Play: 3;
Bose SoundTouch 20;
Yamaha WX-030

HCC VERDICT



Roberts R100

→ £250 → www.robertsradio.com

WE SAY: Yet another multiroom system to add to the list – Roberts' neat-looking radio makes a good, but not great, first impression.

Check out the website at
www.AV4Home.co.uk
Or Call Us On 01623 672070

AV4HOME
ONLINE SINCE 2005



Home
Entertainment
Furniture

Home Office
Furniture

Occasional
Furniture



Home Office



Wide Range of TV Stands and HiFi Racks



Modular Furniture Solutions

Top
International
Brands

QUICK DELIVERY
ON MOST ITEMS



**INTEREST
FREE CREDIT**
AVAILABLE ON ORDERS
OVER £350

0%



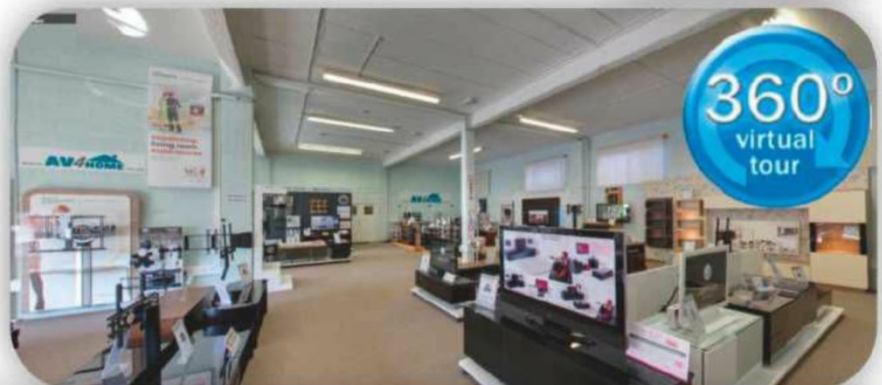
All Types of
TV Brackets
for Flat on Wall to

Fully Articulated
Movement

We Have One Of The Biggest
Selections Of TV Mounts, Motorised TV Mounts,
TV Lifts And Home Entertainment Furniture To
Suit Every Part Of Your Home



Walk Through The Showroom
With The 360 Virtual Tour Or
Come Visit Us At
29—33 Hallamway,
Old Mill Lane Business Park,
Nottinghamshire. NG19 9BG
Free Parking



360°
virtual
tour

**WHY BUY
FROM US**



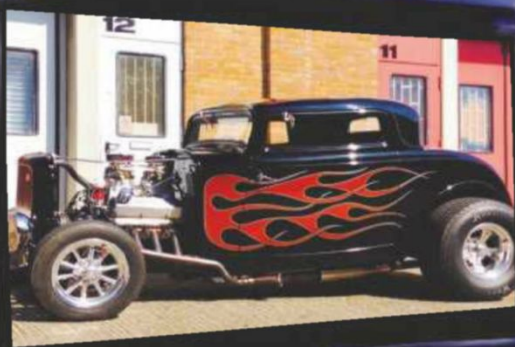
OUR DELIVERY PROMISE
We deliver on time or we will
give you a 10% refund



feefo
Our customers rate
our excellent
service

98%

HOME CINEMA



DESIGN SERVICE

- Award Winning Designer
- Room Design
- Acoustic Design



PRODUCT SUPPLY

- Projectors and Screens
- Audio Visual Equipment
- Control Systems



INSTALLATION

- Experienced Technicians
- Calibration





Digital Copy

After witnessing high frame rate HDR in action, **Mark Craven** is certain it has a part to play when it comes to sports, but he won't be ending his relationship with 24fps film

AMIDST ALL THE 8K displays, VR headsets and smart vacuum cleaners at this year's IFA Show, it was actually a format demonstration that most caught my eye. LG, ever the innovator, was running a showcase for high frame rate (HFR) video, complemented by a Hybrid Log-Gamma (HLG) makeover. Like all good dems, it was the kind that made you stop and stare. And then, having walked away, you wanted to go back and have another look.

The thing is... it was weird. The showreel of tennis players thwacking balls at each other, and shots of groundstaff sweeping red dust off the Roland Garros courts and re-painting white lines, seemed both eerily fake and true-to-life at the same time. It was smooth to the point of distraction (while the HDR effect added a layer of depth) and the smoothness was pure, unfrazzled by the sort of image artefacts that affect pseudo systems.

Did I like it? Kind of. Part of me marvelled at the technical achievement. LG's display was showing me something I'd never seen before, and it merited a quiet hand-clap and a low-whistle. I could see it's immediate attraction with sports, where removing the camera from between your eyes and the action is paramount. Yet another part of me found it troubling. If this is to be the future standard of video, then I'm not sure I like it.

You see, I love film. Not, perhaps, to the extent of my colleague Martin Dew and his appreciation of the noise of a true film projector (see p26), but I like the 24fps nature of film in a way that's hard to shake. The reason why is obvious. Movies have been recorded at 24fps since the birth of talkies – nearly 100 years ago – and almost uniformly remained that way ever since. From the moment I began watching films (a Winnie the Pooh cinematic short when I was four, I think) I've seen thousands of features all

captured that way. It's become ingrained to the point where the gentle judder of a picture and associated lack of detail during camera pans is as much a point of identification of the film-watching experience as Twentieth Century Fox's rousing orchestral intro tune or fumbling for a remote control in the dark.

Now, however – and after Peter Jackson opened Pandora's Box with his 48fps iteration of *The Hobbit* – **we're getting to a point where 24fps is under attack**, and filmmakers aren't just talking about doubling it, but going much higher.

At the IBC broadcasting industry conference that ran shortly after IFA, director Ang Lee (*The Life of Pi*, *Hulk*) was in attendance for a screening of preview clips of his newest film – *Billy Lynn's Long Halftime Walk* – lensed in 4K 3D HDR at 120fps. Lee is obviously enthused by the format's possibilities: 'In the past few years, I have come strongly to believe that new technology will upgrade film-making in terms of story-telling,' he said during the show's awards night. 'In *Billy Lynn's Long Halftime Walk*, the use of high frame rate and high dynamic range will provide, I hope, a unique opportunity.'

Fair enough. I'm not going to stamp my feet and demand that filmmakers stop being creative. At the same time, I know that HFR is something that will take time to get used to. I'll have to unlearn everything that I've taken for granted since Pooh first got his fat bottom stuck in Rabbit's door. Thankfully, due to the lack of cinema hardware (not to mention domestic screens) that can show such fluid footage, I won't have to do that for a while.

But there are future generations that could be born into a world of HFR movies, to the point where 24fps titles look as weird as I found that LG demo ■

Are you excited by HFR? Or do you love the look of 24fps film? Let us know: email letters@homecinemachoice.com

Mark Craven finds it hard to believe that cinemas were still screening a 1966 Winnie the Pooh short in the early 1980s





Film Fanatic

The recent collapse of the Metrodome Distribution Group has **Anton van Beek** lamenting the current state of the UK cinema scene for independent distributors

2015 WAS A bumper year for UK cinemas, with box office takings in excess of £1.24bn. As such, you'd be forgiven for thinking that the industry was in rude health. But while this might hold true for Hollywood majors handling massive blockbusters like *Spectre*, *Jurassic World* and *Star Wars: The Force Awakens*, things have gone from bad to worse for the UK's independent distributors.

Despite hopes that the move to a flexible, digital distribution model would lay the groundwork for a much more varied selection of films to be shown across the UK, finding cinema space is now perhaps tougher than ever for foreign movies, documentaries and the like. Although there are plenty of screens to be filled, most are playing the same blockbusters. Indeed, some 'art house' chains are frequently giving screens over to mainstream Hollywood fare.

Long gone are the days when a foreign-language film like *Crouching Tiger, Hidden Dragon* (2000) or *Amélie* (2001) could take on Hollywood productions at the UK box office, pulling in £13m and £6m respectively. In 2005 the top-grossing foreign-language film on these shores was the German historical drama *Downfall*, which earned around £1.9m. Skip forward a decade and things look more perilous, with 2015's top-performing foreign-language film, *Wild Tales*, only scraping together £0.7m. **Out of the top ten foreign films at the UK box office last year, only three made more than £0.3m.** Ouch.

As such, I greeted August's announcement that the Metrodome Distribution Group had gone into administration with both a huge amount of sadness and a certain amount of weary inevitability. Despite a handful of crossover hits such as rave culture comedy *Human Traffic* (1999), Charlize Theron serial killer drama *Monster* (2003) and Richard Kelly's cult

favourite *Donnie Darko* (2001), the vast majority of films that Metrodome put into UK cinemas failed to trouble the tills to any great degree.

This lack of box office success shouldn't be taken as a knock against the quality of the material it was acquiring. Since its founding in 1998, Metrodome had introduced film fans to Nicholas Winding Refn's *Pusher* trilogy, French action-comedy *Taxi*, Thomas Vinterberg's *Festen*, Australian crime biopic *Chopper*, Ben Wheatley's debut *Down Terrace*, pioneering iPhone movie *Tangerine*, Carol Morley's *The Falling* and – most recently – the brilliant Belgian religious comedy *The Brand New Testament* (pictured). Metrodome had good taste.

It's sad, then, that there's one less company investing in bringing art house films to the UK. And while other indies will no doubt look into Metrodome's existing acquisitions (101 Films has already announced that it has picked up 'certain assets'), it doesn't bode well for those who enjoy a varied choice when they have a night at the 'plex.

A Blu-ray of light

Thankfully, it's not all gloom and doom due to the arrival of new UK distributor Powerhouse Films. This startup appears to have done what others could not and gotten its hands on the keys to the Sony Pictures vault. Home cinema buffs can look forward to the first fruits of this deal on October 24, when the company launches its Indicator Blu-ray label with long-awaited UK hi-def debuts for John Carpenter's *Christine* and Brian De Palma's *Body Double*.

So while the theatrical market may be getting narrower and narrower, it's good to see our home media choices expanding ■

Do you think UK cinemas should screen a wider range of films? Let us know: email letters@homecinemachoice.com

Anton van Beek shall be mourning Metrodome with a double-bill of *The Strange Colour of Your Body's Tears* and *What We Do in the Shadows*





LIMITED EDITION MOVIE & TELEVISION INSPIRED APPAREL

What we watch inspires us. What we wear defines us.



Designed with passion.



Printed by hand.



Sent with thanks.

PLEASE CHECK THE WEBSITE FOR DESIGN AVAILABILITY. SOME DESIGNS FEATURED MAY VARY OR MAY HAVE CHANGED SINCE THIS ADVERT GOING TO PRINT





In The Mix

This issue, **Jon Thompson** wails about Sony's PS4 Pro console before discovering an Android-powered box of tricks that handles every file format he can think of. And that's quite a lot

SONY'S ANNOUNCEMENT THAT it won't be supporting UHD Blu-ray on the PS4 Pro, instead relying on steaming media, forgets that streaming is only as good as your internet connection. Looking objectively, you'll find that the UK is very poorly supported when it comes to high-speed data, the result of a severe lack of investment in upgrading the network. And don't get me started on mobile data speeds – the tech is currently totally unreliable for video streaming let alone any other use.

I like physical media. I like knowing it will work. It won't just stop with a spinning icon due to a lack of bandwidth. Furthermore, I don't have to worry about having a subscription, or rights issues, or trying to remember my user name and password. A Blu-ray just plays. Put the disc in and off we go. Also, in the online world, you might be aware of films and shows appearing and then suddenly disappearing from services. I like knowing I can watch *SpongeBob SquarePants: The Movie* whenever I want. So, Sony, dream on with your 4K HDR streaming utopia.

I think Sony has made a huge mistake by not supporting one of Sony's own technologies (if you follow the intellectual property trail, you'll find Sony is one of the owners of the UHD BD format). Talk about cutting your nose off to spite your face. The PS4 has a Blu-ray drive – it would have been a non-issue to have upgraded it to UHD. It's not like it's a revolutionary technology that costs a fortune.

I am also interested to see if the PS4 Pro can play 4K HDR files via USB, as it has said the firmware couldn't support an update to allow it to use an external UHD Blu-ray drive. USB playback seems to be an even more unsupported format by everyone. Panasonic's DMP-UB900, for instance, doesn't support the very file formats it would be playing back off a UHD disc.

In looking into this, I realised I had missed a whole area of products – Android TV devices. I'd missed these due to the hype around Amazon and Apple TV. The first thing that shocked me was how cheap the devices are. I've now played with a few, but the most intriguing one uses the Quad Core ARM Cortex-A53 CPU chipset, the latest chip that not only supports 4K output but also can output 10-bit and 12-bit, full HDR and, wait for it, Hybrid Log-Gamma and Dolby Vision. It's also HDMI v2.0b, rather than 2.0a.

So how much is this dream box of 4K video playback? Are you sitting down?

It's £29.99. Forget the PS4 Pro – for the cost of a round of drinks you can get the most technically advanced streaming/4K replay device around for just shy of thirty quid. At this price, I'm yet to find a catch; it plays all my USB file formats seamlessly in 4K (I admit that I have a far more diverse selection of files than the average consumer). And, okay, it doesn't have the processing power for games of the PS4 Pro. It still beats it when it comes to 4K video support.

The box (named the ABOX) is made by a Far East company called, erm, GooBang Doo. It runs the Android 6.0 OS – or Marshmallow as Google calls it.

My point here is two-fold. Firstly, 4K HDR video streaming is not ready for primetime as the picture quality from streaming is heavily compressed and you ending up squeezing the detail out of the picture. I'm not interested in lo-fi images, so Sony has made a dumb move that could bite it hard, as it shows no joined-up thinking within the organisation. Secondly, if you're looking for an advanced media player, it pays to hunt around. Just because something is made by a firm called GooBang Doo, doesn't mean you shouldn't take it seriously ■

*Would you happily junk your discs in favour of streaming?
Let us know: email letters@homecinemachoice.com*

When he's not in his screening room, **Jon Thompson** tweets about Hollywood gossip, movie-making and digital mastering at [@johnnyfocal](https://twitter.com/johnnyfocal)





EISA AWARDS 2016-17

Celebrating the year's best products



EISA is the unique association of over 45 special interest magazines in hi-fi, home theatre, in-car electronics, mobile electronics, photo and video, from 23 European countries. Every year the EISA jury of experts rewards the best products in each class with a coveted EISA Award – results that have consistently stood the test of time. So whenever you see an EISA Award logo you can be sure the winning product is the very best of the best.



How to...

Set up your speakers

A new AVR and speaker pack has arrived and you're keen to feel the surround sound mayhem of your favourite flick. But **Richard Stevenson** says spending time planning and setting up properly will go a long way to delivering just what the sound director intended, and make even an average home cinema system sound great...

First up: have you got everything you need? Enough speaker cable and wall brackets or speaker stands? You will also need some handy tools; wire stripper for the speaker cable, and a sound pressure meter (or phone app) just to double-check your AVR's automatic setup levels. If you are installing wall brackets or ceiling speakers, a selection of DIY tools and the skills to go with them are essential. Faced with the possibility of drilling or jig-sawing your way through electrical cables or plumbing, the phone number of a local installer might be a better bet.

Speaker placement

Where you place your loudspeakers is a function of two critical factors; how many channels in your chosen system configuration and the physical limitations of your room. There is no point installing a main speaker in the doorway or a side channel speaker in front of a window; the sound will be adversely affected and you won't hear the movie detail over other members of the household complaining.

A basic 5.1-channel system is easiest to configure. The main front left and right speakers should be roughly equidistant from either side of the screen and with the tweeter around ear height when you are sat on the sofa. THX recommends these speakers are at 45 degrees to the main axis of the room (imagine your listening position being the centre of a circle) while Dolby suggests between 22 and 30 degrees. It really doesn't matter too much as long as you are somewhere in that ballpark, so go with what looks best to the eye. Adding a sub can be a challenge in itself and we covered that in *HCC #264*.

Thankfully THX and Dolby agree that in a 5.1 system, rear speakers should be roughly 90-110 degrees from the same central room axis. You can go back a few more degrees, especially if you are sticking to 5.1, but avoid coming forward of the sofa as this will narrow the soundfield. The centre channel is easiest to place; central to the screen and either above or, usually more practically, below your TV.

1



Stepping up to 7.1-channel simply means adding rear-back speakers to the standard 5.1 setup. These should be at 135-150 degrees from that main axis and maybe a little higher than the front and side channels if you have a tall-backed sofa. There is nothing worse than having your action-movie effects stifled by soft furnishings.

If you're gunning for Atmos, the option is either upfiring loudspeakers or in-ceiling models. Upfiring are way easier to install and you can place them on top of your surround sound speakers if you have a single pair. For a 7.1.4 system the second pair can be placed on top of the main front speakers. Their diffuse sound, created by bouncing their

1. A 5.1 array (such as this DALI Opticon set) is easiest to install

2



2. A 5.1.2 system with in-ceiling speakers. In this Dolby diagram, the surround speakers are positioned at around 110 degrees

3. Take care when wiring speakers that positive and negative terminals are used consistently with your AV receiver

output off your ceiling, means placement is far less critical than with in-ceiling models, so don't sweat this one.

For an overhead, in-ceiling installation, I would recommend four speakers for the best experience. These should be evenly spaced apart in pairs, the front two 45-60 degrees forward of the vertical axis above the listening position and the rear the same behind the sofa.

The chances of all those angles working in the average domestic living room without falling foul of windows, doors, light fittings or practical living considerations is remote. But if you get as close as practical to these figures, mount the speakers securely with direct-firing speakers facing the listening position, you won't go far wrong.

Connecting up

The trouble with speaker cable in home cinema systems is that you need rather a lot of it. By the time you've wired up 11 speakers, navigated around obstacles and routed cable out of sight, it is not unusual to have used well over 50m of cable. Clearly, high-end audiophile cable is not an option but you should seek a quality cable with low resistance. Look for one that is at least 2.5sqmm in cross-section area and ideally built with oxygen-free copper (OFC).

When installing cable always start at the speaker and work back to the AVR, making sure you route the cable in its final position before cutting to length. Work with the whole drum, one speaker at a time to make the most of the cable and label the cut end before moving to the next speaker. Some AVR manufacturers supply cable labels for this purpose. There is no real need to make cables the same length. Although this would mean an identical cable resistance to each speaker, the small sonic benefit is rarely worth the extra expense or practical nightmare of hiding loops of spare cable from speakers closest to the AVR. Keep it neat and tidy, keep it labelled.

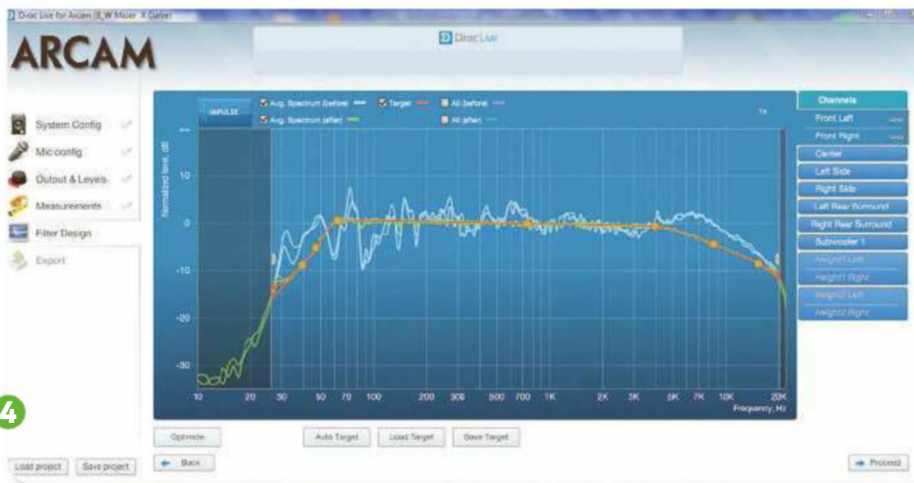
3



While your AVR and loudspeakers will almost certainly have 4mm banana plug sockets they are not necessarily the most practical option for connecting up. You would need up to 22 pairs of banana plugs for a full Atmos system and, unless you spend good money on decent quality plugs, cheap banana plugs have a habit of falling out over time. The most practical and cost-effective connection is bare wire clamped neatly under the binding post.

To do this, carefully strip back 10-12mm of PVC sheath from each conductor and spin the copper strands together until they form a neat, solid end. Open the binding post to reveal its side-entry hole and insert the cable ensuring you are not leaving any stray strands outside. Tighten up the post by hand, clamping down on the bare wire and leaving only PVC covered cable exposed. Double check there are no stray strands before moving on to the next terminal.

Most speaker cable has a marking on one conductor to ensure you keep the polarity correct. Always connect the marked conductor to the red (positive) terminals and you won't go far wrong. It doesn't matter if you align the marked conductor to the black (negative) terminals as long as you are consistent throughout the system. Thankfully, if you ➤



do mess it up, all of today's AVRs will tell you that something is amiss by flagging up a speaker as being 'out of phase' during setup. In which case, simply switch around the connections on the speaker or AVR end (but not both!).

AVR setup

At the risk of getting a bit Monty Python, you've got it easy with today's AVRs. When I was a lad you needed a sound pressure meter, tape measure, calculator and ears like a bat to set everything up manually. You now simply place the microphone in your listening position, engage the AVR's auto setup routine and nip out for tea and biscuits while it emits tones and sets the system up for you.

Auto setup will calculate speaker distances from the listening position, applying sound delays to make your brain think all of your speakers are the same distance from the sofa. This gives the sound a much bigger cinema-like feel. The same routine will also manage the bass to each speaker, diverting low frequencies to the subwoofer for smaller speakers that can't handle big bass effects. It also balances or 'EQ's' the sound by adjusting each speaker's output to cater for frequency imbalances. These can be due to a speaker's unique frequency response or how the sound is interacting with your room. For example, if your room has a lot of soft furnishings, the EQ will raise the high frequency output to negate the effect of these deadening the sound.

EQ gets much more interesting if you are prepared to delve into your AVR's manual adjustments. Depending on the system, you can trim and tailor each speaker to your preference, keep your front speakers natural and balance the sound to match those, or apply specific 'curves' to the overall frequency response. The X-curve, for example, attempts to recreate the ambience of a cinema auditorium. Whether you like the effect of EQ, the X-Curve, or the process of tweaking and trimming your sound or not, it's



Listen to the dialogue – is it clear, crisp and articulate?

Can you immediately identify who the actor is by the timbre of their voice? Does the dialogue sit well within the mix or are voices too recessed or too prominent? A small adjustment – perhaps just 1dB – to the centre channel level can make a big difference to how dialogue integrates with the mix, so it is well worth fiddling. Nic Cage's distinctive tones and propensity to mumble is my dialogue acid test. Against an action background in movies like *Ghost Rider* his voice should be characteristic, charismatic and sit nicely within the frame of the soundtrack without getting lost.

For assessing your system's ability with special effects, I'd suggest giving *The Dark Knight* a whirl. This film should have an enveloping overall sound but not so cossetting you can't make out the myriad of details. Audio should deliver the film's dark and foreboding feel, punctuated with sometimes stark effects. Of course, when you want to test dynamic power, pretty much any one of the film's outrageous action sequences will do just nicely.

For atmosphere, check out *The Hurt Locker* for an intense portrayal of physical and emotional scenery through sound alone. The sound should almost taste of the desert sand and hot sun, and quiet periods should make you slowly clench in tension. If you need something a little less exhausting to watch, one of the best test-films for atmosphere is, ironically, *Gravity*. Particularly breath-taking in Atmos, the periods of space-silence are punctuated by dialogue and effects that place you right in the scene.

Overall your setup's sound should be balanced. Bass should be fulsome and powerful without being fat, treble effects need to have bite and detail without sounding glassy or acerbic and the whole thing should be open and dynamic. Home cinema sound is an integral part of the movie experience and, with a time and effort in setup, your system will deliver Oscar-winning sound every time ■



there to be played and experimented with. It's fun and if you make a dog's dinner of the sound, you can always run the automatic setup routine again.

Proof, pudding

Finally, it's time to kick back with some of your fave films. To stop the visual distraction when evaluating your system, consider turning off your TV. Resist the urge to grab the latest boom-fest and choose movies with more sonic depth than sheer volume.

TOP TIP

BEWARE OF BASS: If you think your system's LFE performance is OTT, then it probably is. In a good setup, a subwoofer should have noticeable impact and depth, but not be a distracting presence!

4. Your AVR will offer its own auto EQ setup – Arcam's home cinema amps feature the advanced Dirac Live system

6. The Dark Knight – a great demo disc with an enveloping soundfield

7. With The Hurt Locker, you should be able to almost feel the desert heat

DO IT!

COST: Ignoring speaker/amp costs, budget around £100 for 50m of good-quality speaker wire, such as QED's unterminated 79 Strand cable.

TIME: Allow at least 1-2 hours to wire in a 5.1 setup from scratch, run your AVR's setup routine and assess system performance.

Bringing
the **cinema**
experience to
your **home**...

studio 

Telephone 01753 863300



Whether you're looking to install a dedicated home cinema system complete with seating, or simply want a great surround sound system for your living room, come to **studioAV**.

Our friendly team are able to advise you on a wide range of products so you can find exactly what you need.

We are relocating to our new custom built demonstration facilities near Wentworth Surrey this October.

Please contact us to arrange your exclusive audition.

www.studioav.co.uk sales@studioav.co.uk [@studioAVLtd](https://twitter.com/studioAVLtd)

oppo

Now available
in black, white,
red and blue

tech
radar
2015
EDITOR'S CHOICE
★★★★★

“Don't even bother
reading this review -
just go out and buy
these headphones”

PM-3 Closed-back Planar
Magnetic Headphones

Portable Headphone
Amplifier & USB DAC
HA-2

“...a crushingly
competent piece of
equipment for the
asking price”

avforums
BEST BUY
AWARD

RISA
AWARD
Best
Product
2015-2016
USB DAC/HEADPHONE AMP/FX
OPPO HA-2

oppodigital.co.uk



*“In short, this is a good value
and great-sounding cable”*

Chord Clearway speaker cable
Hi-Fi Choice Dec 2015

THE
CHORDTM
COMPANY

Designing & hand building  in England since 1985

*“This interconnect handles complex music with
ease, delivering a performance that is lively and
involving. It takes both classical and modern
music in its stride”*

Chord C-line interconnect
Hi-Fi Choice Nov 2015



Feedback

Got an axe to grind? Need to comment on current technology? Want to share your knowledge with our readers? **Team HCC** is here to help

Bugged by Bluetooth

Hi there. I love the mag and was very interested in your Bluetooth headphone article *Accessorize Me!* [HCC #260], and the outcome of your wireless headphone results. However, I am afraid it was lacking in a real-world test use of this Bluetooth technology and the pitfalls accompanying it – lip sync!

I have an older (Yamaha RX-V767) receiver, no network nor Bluetooth connectivity, but it has everything else for enjoying Blu-ray viewing. For Bluetooth, I purchased a pair of Sony MDR-ZX770BNL headphones (supporting aptX) to potentially use at night and to take travelling using my Android tablet. I also have several various BT headphones/tablets, etc, around the house.

To use the Bluetooth headphones for home cinema, I've purchased a Bluetooth transmitter, which connects into the headphone jack of my amp. This is where the lip-sync problem lies. Apparently there is a terminology called 'low latency' that specifies the lag time between transmitting audio and receiving it via headphones, the lower the better. Quite a few of these cheaper transmitters state 'low latency' but few, if any,



are successful in overcoming this. At present I am slowly working my way through and up the price range of Bluetooth transmitters from Amazon, sending them back, until I receive one that works!

Your review used a USB dongle plugged into a computer (not a headphone transmitter). I successfully also used a USB dongle using my Bluetooth headphones watching on the PC, with no issues. Unfortunately, I don't use my PC for home cinema use; I use a receiver, projector/TV, and a Blu-ray player. Is there any way you can review or pass on knowledge

Yamaha's MusicCast AVRs offer Bluetooth transmission

regarding successful use of a headphone Bluetooth transmitter or a better system?
Steven Williams

Ed Selley replies: Thanks for the letter, Steven. Using a Bluetooth transmitter via an AVR's headphone jack is a bit of a workaround necessitated by the fact that the Bluetooth capability of many receivers extends only to receiving, and not transmitting. And as you said, you should use a transmitter that

I need a new, cheap TV!

Hi. I'm looking to replace an ageing 32in HD TV. Needs to have Wi-Fi (for Netflix) as not everyone in my family likes having to use the PS4, and be around 40in/42in. Any suggestions?
Graeme Nicholas

Mark Craven replies: Eight years? Yep, it's probably time for an upgrade! You don't say if you're interested in 4K, but it's getting harder to find good-performing Full HD sets these days. The good news is that you'll certainly find a Wi-Fi-enabled model with a Netflix client.

Check out the likes of Panasonic's TX-40DX600 (pictured), which features Freeview Play for catchup TV, Netflix and Amazon apps in 4K to match the TV's resolution, and is available for around £500. Alternatively, Samsung's 43in KU6000 adds HDR playback, although we haven't tested this set yet.



Panasonic's
DX600 series –
affordable 4K

supports low-latency aptX, as well as compatible headphones. These should limit latency to 40 milliseconds.

However, with such transmitters, the conversion from a digital signal to an analogue one and then back to digital is going to be a challenge, even when they have measures to cope with latency issues. By far the most reliable means of reducing sync issues is to use an AVR with the ability to transmit Bluetooth onboard. Yamaha's MusicCast range, beginning with its RX-V481, fits this bill. The signal here should be generally free from latency issues and even take into account distance and delay settings. I appreciate that 'buy a new AVR' is hardly a budget answer but it might be worth considering if you're also looking to upgrade your setup to cater for 4K video and Dolby Atmos audio. An alternative for your TV and movie viewing would be to consider using RF or UHF transmission headphones instead – perhaps a slightly old-school option but one that still works well.

Where's the KS9800?

Hi, I note as yet you have not made any mention of Samsung's latest KS9800 flagship TVs. These look interesting as they now have a FALD backlight, not edge-lit.

A review of these new flagship models would be very welcome before looking to purchase. I took your advice with the review of the Marantz AV8802A and I am very pleased with the results of my now 7.1.4 Atmos system.

I note Samsung makes both a 78in and 88in version of the KS9800. Would there be a drop in picture quality in the 88in due to its larger size?

Brian Langford

John Archer replies: Samsung's high-end TV lineup has caused some confusion this year, mainly because of discrepancies between the numbering system used in the US and the UK – a situation that meant some of the models announced at CES in January have arrived in the UK with different features.

We haven't tested the KS9800 series because Samsung has yet to make models available for review. However, as far as we're aware, the KS9800 is only a single option in the UK (88in), and shares essentially the same specifications (but a slightly different bezel design) as the KS9500 series. Of the latter, we look at the £3,800 65in model on p40 – there's also a 78in version available for £6,500.

Anyway, the 88in KS9800 retails for a cool £17,000. This may well be within your budget, but I wouldn't be surprised if it wasn't!

As for image quality differences between a 78in and 88in TV, I wouldn't worry. Ultra HD looks excellent via projectors screening at such sizes – and beyond. Any possible perceived

★ Star Letter...

Optimal viewing distance? Not for me

I hope Steve May had his Avenger tongue firmly in cheek when he advised sitting at a distance of 1.6 times the display height [HCC #263]. The ITU guideline he quotes of 1.6x for 'optimal viewing' was based on 'the distance at which two adjacent pixels subtend an angle of 1 arc-min at the viewer's eye'. This is the maximum angle that the human eye can typically resolve. So if you want to regularly compare two adjacent pixels, then yes this is the optimal distance for you to sit.

However, this distance of 1.6x height creates a horizontal field of view of about 58 degrees (in 16x9 aspect ratio). I don't have superhero vision and I really hate swivelling my head back and forth, so I fall back to the recommendations from SMPTE, THX, etc. I must not be alone since the same ITU report also reported a difference between 'preferred viewing distance' and 'optimal viewing distance'.

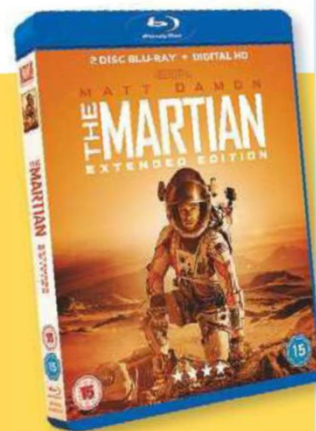
When 8K finally arrives we may very well have to press our noses against the screen to optimally view each of the 33 million pixels. Or just sit back and enjoy the movie. Ion

Mark Craven replies: Time to hold our hands up – Steve's originally column copy did state that the ITU's suggested optimal

viewing distance for UHD displays was between 1.6 and 3.2 picture heights. Unfortunately, during the editing process, this was changed to 'as little as 1.6 picture heights,' which I'll admit is perhaps a little misleading. Similarly, the 8K optimal viewing distance was listed as 'as little as 0.8 picture heights.' Still, Steve's point remains that as resolution increases, we're being invited to sit closer to our screens.

And, yes, you don't have to do this. Personally, I've paid little heed to viewing distance suggestions. As my TVs have got bigger, the rest of my house hasn't. As you say, 'sit back and enjoy the movie' is a much greater way to spend one's time than pacing the living room with a tape measure...

Star letter-writer Ion wins *The Martian: Extended Edition* on Blu-ray. This new version of Ridley Scott's sci-fi blockbuster features 12 minutes of additional footage and boasts a host of exclusive extra goodies including a director's commentary, a feature-length *Making of...* documentary, deleted scenes and an exploration of NASA's ongoing plans for sending astronauts to Mars. *The Martian: Extended Edition* is available to own on Steelbook, DVD, Blu-ray and 4K Ultra HD Blu-ray from October 3, courtesy of Twentieth Century Fox Home Entertainment.



reduction in sharpness will be buried beneath the extra immersion of the larger screen. However, it may be that backlighting inconsistencies – still possible on a FALD panel – may be more apparent on the larger screen if the number of dimming zones remains the same.

What price JVC 4K?

I saw on your Facebook page that JVC's new native 4K projector will cost £30,000. I'm sure it's a great PJ, but that immediately makes it too much for me!

Do you know if now that JVC has made a true native 4K projector and not an upscaling one, that it will release step-down models (without the laser) at lower prices? As a happy JVC projector owner I've been waiting patiently for a new line. Sam

Mark Craven replies: Currently, we don't know of any other JVC 4K projector plans beyond the DLA-Z1, which is also HDR capable and, as you say, based around a laser light engine. JVC is obviously trying to grab a slice of the very high-end home cinema market. I'd be

surprised if it didn't have something lined up for the future, though.

Note that Epson is releasing HDR-capable, but not native 4K, models at more palatable prices, should you be desperate to upgrade your existing JVC.

Give region-coding a rest!

Am writing in to agree with Simon [Star Letter, HCC #264]. Region-coding on Blu-ray and DVD is ridiculous in this day and age, particularly when it's so easy to buy discs from all over the world. Often there are Blu-rays released in America that are superior to the versions sold in the UK, and region-locking titles punishes those of us who happen to live here. As Simon points out, all region-coding has done is create an industry of region-free players and disc import websites. Surely the studios should drop it now. I hope Ultra HD Blu-ray (being region-free) is a sign of things to come. Alan M

Anton van Beek replies: Okay, I think we can all agree that we're sick of region-coding! Unless anyone – anyone at all – wants to

write in and stick up for the practice. I'm pretty certain our inbox won't be overflowing there.

I want 4K BD for the audio

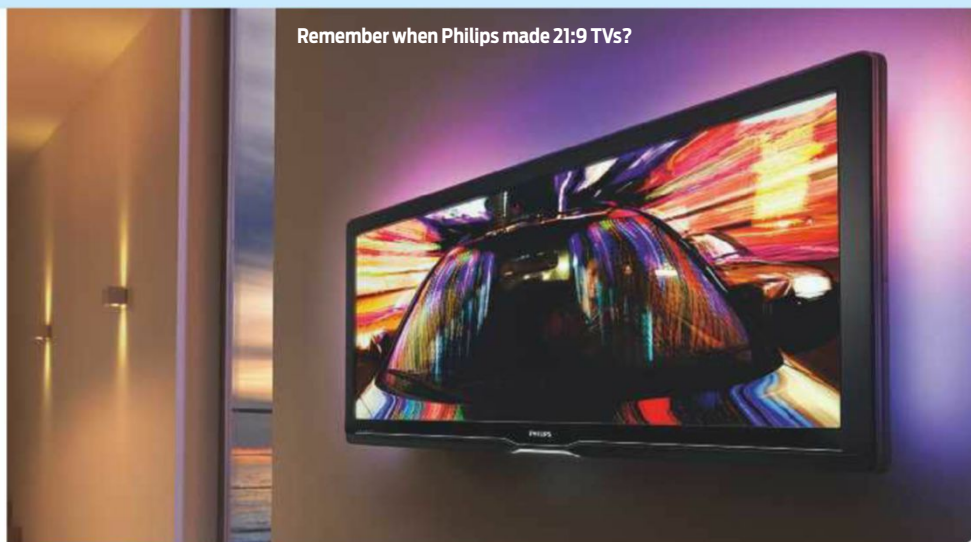
Hi, can you help out please! I have a fantastic Denon AVR-X7200WA receiver and great DBT-3313UD Denon Blu-ray player, wired to a Philips 21:9 58PFL9956H/12 TV.

Now I am hooked on the 21:9 format from Philips and don't want to upgrade to a new UHD 4K screen because of this. But I do want to perhaps upgrade to a new 4K Blu-ray player to complement my setup, and the main reason to do so would be this: when connecting a new 4K player in my current setup would I be able to play the Dolby Atmos or DTS:X track and play the 4K disc in the 1080p24 format that is accepted on my Philips TV (since it's not 4K)? Because it seems that some UHD 4K discs, like *Independence Day*, do have a Dolby Atmos track and the regular Blu-ray does not!

Or will my screen be left blank when I play a 4K disc with a new 4K player? This question puzzles me and I can't seem to find an adequate answer on this...

Wim Van den Broucke

Mark Craven replies: An interesting question, Wim, as you're certainly not the first person to notice that some 4K BD releases are packing



object-based soundmixes on the UHD discs but not the Full HD counterparts. *Independence Day*, for instance, features a DTS:X mix on the 4K platter.

I'm impressed that you think this is reason enough to invest in a 4K deck, given that you aren't planning to upgrade to a 4K TV. You must really love the Philips 21:9!

So, will it work? Yes, hopefully. Either you can route the audio to the Denon and the video straight to the TV (using a 4K deck's twin HDMI outputs), or send both to the Denon and send video on from there. Then, during the HDMI 'handshaking' phase, the Philips TV will notify the player (or AVR) that it doesn't

support HDCP 2.2 and the player will therefore output the disc at HD resolution. I say 'hopefully' as I don't like to rely on HDMI transmission to always do what it's supposed to do, and haven't got Philips' HDMI v1.4 set to hand to double-check! Try and borrow a player to test before you buy ■

Contact us...

Write to HCC, AV Tech Media Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent, TN8 6HF, or email us at letters@homecinemachoice.com Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.

WIN! Great Blu-rays up for grabs...

Just email your answer to Competitions@homecinemachoice.com to be in with a chance to win



American Horror Story: Hotel

American Horror Show: Hotel and *American Horror Story: Seasons 1-5* are available to own on Digital HD now and on Blu-ray and DVD from

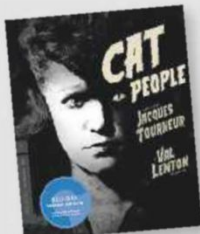
October 3, courtesy of Twentieth Century Fox Home Entertainment. And to celebrate we've five *American Horror Story: Hotel* Blu-rays to give away.

Question:

Which female pop star plays a vampire in *American Horror Story: Hotel*?

Answer:

A) Lady Gaga **B)** Taylor Swift **C)** Rihanna
Email your answer with 'AHS: Hotel' as the subject heading – and don't forget to include your postal address!



Cat People

This legendary 1942 fright flick stars Simone Simon as a woman who believes herself cursed to transform into a feline predator should she experience any physical intimacy.

A brand-new 2K restoration of *Cat People* is now available to buy on Blu-ray courtesy of The Criterion Collection and to mark the occasion we've got five to give away.

Question:

Who directed the 1982 remake of *Cat People*?

Answer:

A) Paul Verhoeven **B)** Paul Schrader
C) Paul Thomas Anderson

Email your answer with 'Cat People' as the subject heading – and don't forget to include your postal address!



Green Room

A young punk band find themselves under attack from neo-Nazi skinheads in this claustrophobic thriller starring Patrick Stewart, Imogen Poots and Anton Yelchin. *Green*

Room is out now on Blu-ray, DVD and Digital HD, courtesy of Altitude Films, and we've got five Blu-rays to dish out.

Question:

Patrick Stewart and Anton Yelchin have both starred in which popular sci-fi franchise?

Answer:

A) *Star Trek* **B)** *Planet of the Apes*
C) *The Matrix*

Email your answer with 'Green Room' as the subject heading – and don't forget to include your postal address!

Terms & Conditions

1. Entrants must be aged 18 or over and resident in the United Kingdom. 2. Employees of MyTimeMedia Ltd and companies supplying competition prizes are not eligible to enter. 3. No responsibility will be accepted for delayed, mislaid, lost or damaged entries. 4. Only one entry per household; multiple entries will be discounted. 5. Prizes will be awarded to the first correct entries drawn at random after the closing date. 6. No alternatives, cash or otherwise, will be offered to the winner as prizes. 7. The editor's decision is final. 8. Comp winners' info available on request. 9. The closing date is November 3, 2016.



HARPENDEN • EDGWARE • BECKENHAM



3 times award winner
HOME CINEMA CHOICE
"Best Multiroom Installation"



THE BEST IN HOME ENTERTAINMENT

Whatever you're looking for, from a radio or headphones to the very latest TVs, Home Entertainment systems and Home Automation installations, Musical Images is a trusted, local expert you can rely on. For the finest brands, caring service and true expertise there's no better choice for your entertainment. Come in and see us soon.

**HIFI • HOME CINEMA • MULTIROOM AUDIO • HOME AUTOMATION
LIGHTING CONTROL SYSTEMS • A/V DESIGN & CONSULTANCY**

Musical Images Showrooms Opening times 9.30am - 5.30am. Monday - Saturday. Closed on Wednesdays

126 High Street, Beckenham
Kent BR3 1EB
Tel: 020 866 33 777
beckenham@musicalimages.co.uk

173 Station Road, Edgware
Middlesex HA8 7JX
Tel: 020 8952 5535
edgware@musicalimages.co.uk

82 High Street, Harpenden
Hertfordshire AL5 2SP
Tel: 01582 764246
harpenden@musicalimages.co.uk

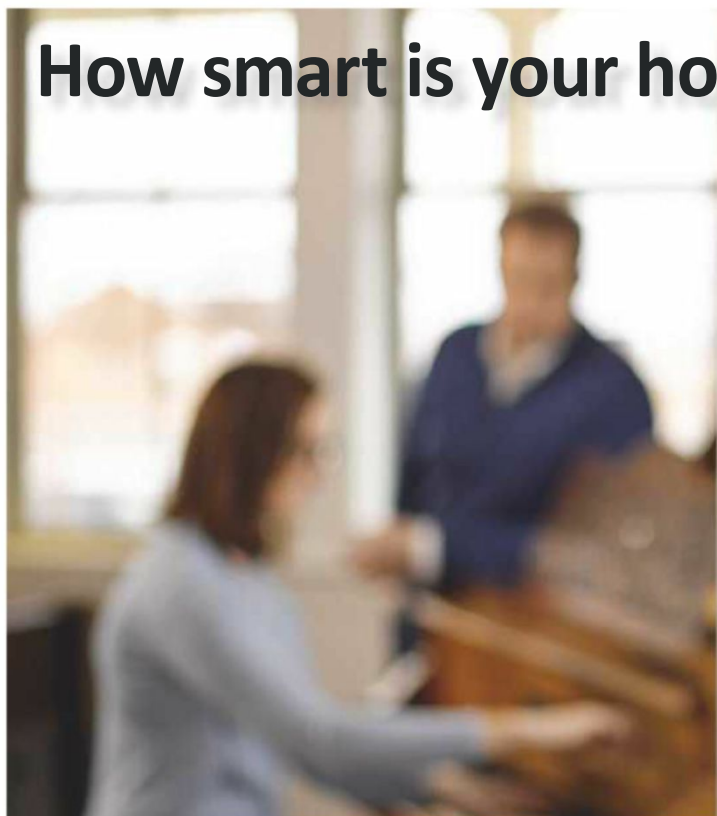
www.musical-images.co.uk

musical images

@musical_images

Audio Visual Lifestyle Ltd trading as Musical Images. Finance options available, subject to status. E&OE

How smart is your home?



Home Cinema, TV, Music, Lighting, Curtains & Blinds, Heat & Cool, Access Control & Security.

Whether it's a one room man cave, or a whole-home automation system, we provide a personalised smart home experience to enhance your life and provide comfort, convenience and peace of mind

PROGRESSIVE
HOME TECHNOLOGY

Progressive Home Technology
The Old Saw Mill, Langton Road, Speldhurst, Tunbridge Wells Kent TN3 0JU

01892 860801
progressive-ht.com

Certified: AV-Holic!

HCC reader **Jonathan** knew he wanted to turn his double garage into a movie lover's paradise, but it had to be neat and discreet, too. Here he guides you through his new twin-screen setup which mixes powerful performance with sleek aesthetics

This cinema doubles as an everyday living space



Welcome to the AV-Holics Hall of Fame! Introduce yourself...

Hi, I'm Jonathan. I'm 37 and am MD of a land/building/architectural surveyors business in Glasgow.

How long have you been into home cinema, and what was the first setup you had?

I've been into home cinema since 1998. I walked into a specialist retailer (Glasgow Audio) one day and was blown away. I purchased a Sony DVD player, Denon AV receiver, four Bowers & Wilkins 601 S1 standmount speakers and a centre speaker. It was a great wee 5.0 setup.

My parents wouldn't let me buy a subwoofer as they complained about the level of noise as it was. At 18, my bedroom was the life and soul of the street!

When/why did you decide to build this new cinema room?

We bought our house two years ago and decided then that the double garage would

be used for future expansion and not for storing the lawnmower and garden utensils. My wife took a bit of persuasion but I finally convinced her that we should go ahead with the custom install.

I would rather have had a dedicated cinema room, but the happy medium was a nice living room with an awesome cinema working away in the background. And in February/March this year, we got to work.

How long did it take and did you get help?

I produced the designs, drawings and building applications myself. I am an experienced AutoCAD user, so I created CAD [Computer Aided Design] drawings of cable routes and false walls – everything really – which took a while.



The actual build took around four weeks. My builder was great and let me in at the critical stages to lay speaker cables/HDMI cables, etc.

I ruptured my Achilles tendon just before the build and was subsequently in plaster for nine weeks, so I did need some help with the cabling from my friend Richie. Other than the four ceiling speaker holes, the wall with the TV and the projector screen, I did everything myself. The worst moment during the install was when I almost fell off the ladder while helping the joiner to insert the screen into the ceiling!

I would like to thank Dan Bland of The Movie Rooms in Edinburgh where I purchased all of the equipment. He provided a great service and visited my house to carry out a full system calibration a couple of months after the install.

How easy was it to fit the B&W in-ceiling speakers?

The B&W CM663 speakers were easy. They have a simple locking system and were easy to wire up. The cables were hidden against my joists before a layer of plasterboard was added with a 25mm gap giving some additional soundproofing.

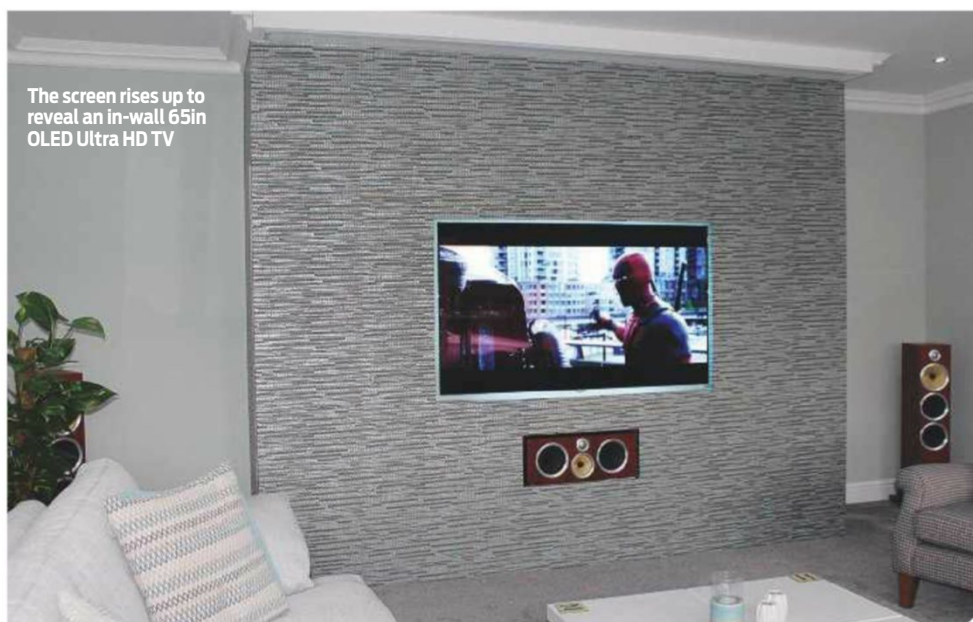
Talk us through the system hardware...

The room has two screen options – an LG OLED TV (65in EF950V model) and the 120in in-ceiling Grandview Cyberscreen drop-down projector screen, which I use with a Sony VPL-HW65ES Full HD projector. So, currently, the flatscreen is Ultra HD but the projection setup isn't.

The speaker system is all from Bowers & Wilkins – 2 x CM9s, 2 x CM8s, a CM Centre2, a PVID subwoofer and the four CCM663s for in-ceiling height channels. There's 68m of Chord Company Clearway speaker cable running around the room. The AV receiver is a Pioneer SC-LX59; I also have a Pioneer BDP-LX58 Blu-ray player and NA-50A music streamer.

Also in the system are my new Panasonic DMP-UB900 Ultra HD Blu-ray player and Sky Q Silver PVR, plus an Amazon Fire HD media streamer, Drobo 5N NAS server, Philips Hue lighting and a Logitech Harmony Ultimate (with iPad app).

The screen rises up to reveal an in-wall 65in OLED Ultra HD TV



What do you love the most about having your new cinema space, and how often do you use it?

We use the room as our main living room and watch everything from Sky to Netflix to the 10 O'clock News. The projector screen comes down at the weekend for the kids to watch

a movie and then it's our turn when they go off to bed!

How do you rate the performance of your system, and what's your impression so far of Ultra HD Blu-ray?

If I'm honest, I'm underwhelmed with the 4K ➤



B&W's CM9: 'a work of art', says Jonathan



A 4K BD player and Sky Q PVR are the latest arrivals



The room uses a Full HD Sony projector



Hue lighting lets our AV-Holic get colour creative



Blu-ray. Perhaps my expectations are too high. The high dynamic range steals the show rather than the resolution. Maybe firmware updates and better discs (i.e. not ones based on 2K masters) will improve things.

I think Sky Q 4K is excellent for a satcaster. The football in Ultra HD simply looks crystal-clear. I've watched bits of Sky's 4K movies, but there isn't the jump from HD that there was when SD was replaced by HD.

Roughly how much have you spent on the project?

The actual build was around £16,000. I lost track on what I spent with the AV equipment, but it was around £20,000.

So, what's your favourite bit of hardware?

My Pioneer Blu-ray player is immense. It's that

good that I don't think there is a huge difference between it and the Panasonic UHD deck. I also love my B&W CM9s – they are a work of art.

The PJ and screen is the real star of the show, though.

And what's next on your list?

Another subwoofer maybe – I think upgrading to a 5.2.4 setup would make a big difference. And once 4K/Ultra HD projectors drop in price level, I will be adding one of those to my shopping list.

What do friends and family think of the cinema room?

They love it. It's not obvious what is behind-the-scenes in the room, but when the lights go out and the screen comes down, people are generally blown away.

What discs do you use to show off the system?

Tron: Legacy is a must, especially on the LG OLED. *Dawn of the Planet of the Apes* looks amazing also.

The best Atmos disc so far, in my opinion, is the US import of *Goosebumps*. Oh, and *The Martian* looks spectacular on the PJ screen. As does *Star Wars: The Force Awakens*. I could go on!

And, lastly, what are your favourite films?

I love action films but I'd say my favourites are *Batman (The Dark Knight/The Dark Knight Rises)*, *Pulp Fiction*, *Django Unchained*, *Indiana Jones...*, and *Star Wars* (original trilogy and *The Force Awakens*) to name a few... ■

Share your system in the mag!

If you want to be in **HCC**, you'll need to send us some hi-res images of your cinema room. Here are a few tips for great-looking pictures:

1. Go big. Set your camera to take images at the largest possible size, and at the highest resolution. Don't worry about cropping or resizing – we will make them print-ready.
2. Get in focus. Make sure your photos are as sharp and clear as possible. If you have one, use a tripod, or place your camera on a flat, steady surface and take pictures on a delay. The sharper they are, the bigger we can print them.
3. Let some light in. While we tend to watch

movies in the dark, our cinema systems look their best when they are lit. If you can shoot with natural daylight, do so. If your room doesn't get a lot of light (a garage conversion, for instance) then switch on whatever lights are fitted. Avoid using flash wherever possible.

4. Be thorough. Send photos of as much of the room as possible. Images of both the front and back of the room, the kit rack, speakers, seating, disc shelf, movie poster art... The more the merrier.



5. Don't be shy. Send a picture of yourself!
6. Show us more. Got pictures of your room before it was a cinema? Or snaps of work being done? We love to see these, too.

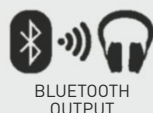
Email your selection of images to

letters@homecinemachoice.com with the subject heading 'AV-Holic'. Provide us with some information about your setup – including a full kit list – and we'll then be in touch.



NAD's New Classic Amplifiers.

Intelligent. Powerful. Efficient.



C 368 £799

This advanced amplifier includes many cutting-edge technological breakthroughs developed by NAD over decades of creating affordable ultra-high performance audio components.

FUTURE-PROOF MODULAR DESIGN.

This NAD exclusive feature allows you to customise your C 368 amplifier with additional capabilities and features, now or in the future. The two available MDC slots can accommodate a variety of upgrade modules including 4K video capable HDMI switching, additional Digital Inputs, additional Analogue and Phono Inputs, and one of the most advanced Hi-Res Audio multi-room wireless systems available, the BluOS music management system developed by Bluesound. BluOS connects to your network and is controlled via smartphone, tablet or desktop to manage your music collection and connect to a growing list of high-quality streaming music services.

C 338 £599

The C 338 includes Wi-Fi and Network Streaming and supports both Google Cast and Spotify Connect. It also provides access to internet radio stations and can serve as an UPnP Client for network streaming from a local NAS library.

You can connect instantly to the C 338 with Bluetooth allowing you to stream music wirelessly from any Bluetooth-enabled device. The high performance aptX codec is fully supported for true CD-quality sound.



C 388 £1499

Every detail of the powerful C388 has been carefully planned and perfectly executed to wring out every last drop of performance. Featuring NAD's exclusive modular design, adding the optional BluOS Module provides access to your local area network via Wi-Fi or wired Ethernet connection and adds Hi-Res Audio streaming.



Bowers & Wilkins



P7 WIRELESS £319

Wireless headphones with Bluetooth aptX.



P3 SERIES 2 £119

Lightweight, foldable on-ear headphones.



PULSE SOUNDBAR £999

The PULSE SOUNDBAR is the world's first Hi-Res Audio soundbar, supporting audio resolutions of 24 bits and up to 192kHz sampling rate. Furthermore, it supports Master Quality Authenticated (MQA) high-resolution audio streams, another first in the soundbar category. But it is not just the ability to handle hi-res audio streams that make the PULSE SOUNDBAR so unique, it is how it brings music and movies to life with its natural and dynamic sound quality.



PULSE SUB £599

Small and Easy to Live With. With the PULSE SUB, Bluesound has reimagined the subwoofer. Most subwoofers are large cubes that don't often fit very well in the typical living room. The PULSE SUB on the other hand, is a compact, slim, rectangular shape, allowing it to fit beside, behind, or underneath living room furniture. This room friendly design has several clever installation options.

SOME BRANDS/PRODUCTS ARE NOT AVAILABLE AT ALL STORES. SPECIAL OFFERS ARE NOT IN CONJUNCTION WITH ANY OTHER OFFER (NICWAOO).

ADVERT VALID UNTIL 18/10/2016. E&OE



www.SSAV.com

SEVENoaks
SOUND & VISION



£2699
OR LESS



ARCAM • FMJ AVR550 • AV RECEIVER

Dolby Atmos 7.1.4 capable AV receiver that is equally at home with high resolution surround sound or two-channel music.

Also Available: ARCAM FMJ SR250 & FMJ AVR850



NEW **£499**
OR LESS



DENON • AVR-X2300W • AV RECEIVER

Fully loaded with the very latest audio and video technologies including Dolby Atmos up to 5.1.2 and Network Audio Streaming.

Also Available: DENON AVR-X6300W



NEW **£799**
OR LESS



DENON • AVR-X3300W • AV RECEIVER

7.2-channel receiver with Dolby Atmos, Spotify Connect support, Bluetooth, AirPlay and DSD streaming.

Also Available: DENON AVR-X4300W



NEW **£1399**
OR LESS



PIONEER • SC-LX701 • AV RECEIVER

New 9.2-channel Network AV receiver with Dolby Atmos, Wi-Fi, AirPlay, DLNA, Bluetooth and Hi-Res audio playback.

Also Available: PIONEER SC-LX901



NEW **£499**
OR LESS



YAMAHA • RX-V581 • AV RECEIVER

This 7.2-channel AV Receiver supports the latest Dolby Atmos and DTS:X formats along with MusicCast and HDMI 4K60p

Also Available: YAMAHA RX-V381



NEW **£1999**
OR LESS



YAMAHA • RX-A3060 • AV RECEIVER

Supports Dolby Atmos and DTS:X playback with along with 11.2-channel expandability for an unmatched 3D AV experience.

Also Available: YAMAHA RX-A660 & RX-A1060

YAMAHA • YSP-2700 DIGITAL SOUND PROJECTOR

This premium quality soundbar/sub is designed for exceptional sound quality and is compatible with MusicCast, Yamaha's new revolution in network audio.



NEW **£799**
OR LESS



CANTON • DM 55 • SOUNDBASE

The Canton DM 55 sets a new standard for TV sound. Intended to be positioned under a TV's pedestal stand, the DM 55 creates a convincing, room filling sound.



ESSAV
.COM



WHAT HI-FI?
EXCELLENCE 2017

YAMAHA • YAS-306 • SOUNDBAR

MusicCast compatible soundbar featuring a stylish design. It delivers powerful 7.1ch surround sound and generous bass from its two built-in subwoofer units.



NEW **£349**
OR LESS



Q ACOUSTICS • MEDIA 4 • SOUNDBAR

The new Q Acoustics Media 4 is a high performance Soundbar designed to deliver high fidelity reproduction of music, and high quality audio from a TV or set top box, tablets and smartphones.



NEW **£799**
OR LESS



WHAT HI-FI?
EXCELLENCE 2017



SONOS • PLAYBAR SOUNDBAR & WIRELESS SPEAKER

This plug-and-play unit incorporates 9 integrated amplified speakers. Simply connect it to your TV with the supplied optical cable to deliver an epic home cinema sound in your own living room. PLAYBAR can also expand your existing Sonos system.

ESSAV
.COM

WHAT HI-FI?
EXCELLENCE 2017

YAMAHA • YSP-5600 • DIGITAL SOUND PROJECTOR

3D sound reproduction equivalent to 7.1.2 channels realised using Yamaha's unique Digital Sound Projector technology to let you enjoy movies and music with thrilling 3D surround sound. Includes Yamaha's MusicCast functionality.



£1699
OR LESS



KEF • R100 5.1 • SPEAKER PACKAGE

Comprises four R100 speakers, an R200C centre speaker and R400B active subwoofer. Great for both home cinema and music.

£2849
OR LESS



B&W • MT-50 • SPEAKER PACKAGE

This system swaps the PV1D for the compact but punchy ASW608 Subwoofer. Available in matt black or white.

£1089
OR LESS



ARCAM • SOLO MOVIE • HOME CINEMA SYSTEM

Featuring a BD/DVD/SACD/CD drive and 250W of breathtaking Class G amplification in a stylish, low-resonance enclosure, the Solo movie provides high-quality room-filling sound. Four HDMI, coax, optical, phono and 3.5mm line inputs allow for flexible system building without being over complex.

£2199
OR LESS

PSB • IMAGINE X DOLBY ATMOS SPEAKER PACKAGE

5.1.2 Dolby Atmos package comprising PSB Imagine X1T floorstanders, XC centre speaker, XB compact speakers and XA Dolby Atmos enabled speakers. True-to-nature sound is the design goal of all PSB Speakers. Imagine X brings a new level of realism to these affordable speakers applying the latest speaker materials and technology.

£1799
OR LESS



SONY • VPL-VW320ES • 4K SXRD PROJECTOR

A fantastic option for movie lovers who want an incredible cinematic experience at home, far beyond the reach of TV.

£5849
OR LESS

SAMSUNG
SUHD TV^{4K}

UE65KS9000 • 65" CURVED 4K UHD TV

Optimum curved screen with auto depth enhancer delivering a deeper, wider, clearer viewing experience. The curved screen surrounds you while Samsung's Auto Depth Enhancer technology creates a greater depth of image. The curved screen also offers a wider field of view bringing the corners closer to you providing a clearer view with ultimate levels of detail. Optimal screen curvature means the curve radius is customised by screen size allowing you to lose yourself completely in the immersive viewing experience.

Also Available **49 55 78** **FREE 5 YEAR WARRANTY**

Ask in-store for the latest promotion

FOR THE LATEST TV PROMOTIONS AND PRICES VISIT WWW.SSAV.COM

LG **ULTRAHD PREMIUM**

OLED55E6V • 55" 4K UHD OLED TV

OLED's next generation pixel construction allows for unique screen architecture which is so light and thin it can be bonded to a transparent piece of glass. This stunning television produces an incredible picture with infinite contrast that is complimented by an innovative sound bar stand that produces superb audio. A masterful television from LG's award winning OLED TV range.

FREE 5 YEAR WARRANTY Also Available **65** **DOLBY VISION** **NEW**

Ask in-store for the latest promotion

SONY **NEW**

KD-65ZD9 • 65" 4K UHD ANDROID TV

The Sony Bravia ZD9 is a 4K HDR TV with spectacular image quality and a beautiful design. It also comes with the Android TV platform, that includes all your favourite apps and online features.

Experience incredible contrast, real-life colours and exceptional 4K detail with the new 4K High Dynamic Range technology.

Whether you're watching a movie or a regular broadcast, 4K HDR brings you close to reality, thanks to Sony's unique technology.

Ask in-store for the latest promotion

FREE 5 YEAR WARRANTY Also Available **75** **4K HDR**

SAMSUNG • UE55KS7000 • 55" 4K UHD TV

Also Available **49 60** **FREE 5 YEAR WARRANTY**

PANASONIC • TX-58DX902 • 58" 4K UHD TV

Also Available **65** **FREE 5 YEAR WARRANTY**

SONY • KD-55XD9305 • 55" 4K UHD ANDROID TV

Also Available **65** **FREE 5 YEAR WARRANTY**

ULTRA HD Blu-ray **ESSAV .COM**

SAMSUNG • UBD-K8500 • 4K UHD BLU-RAY PLAYER

Delivers stunning UHD 4K resolution while its sleek, curved design matches seamlessly with any Samsung Curved SUHD TV.

Also Available: SAMSUNG BD-J7500

ULTRA HD Blu-ray **£599 OR LESS**

PANASONIC • DMP-UB900 • 4K UHD BLU-RAY PLAYER

Premium player that features playback of Ultra HD 4K Blu-ray discs, HDR playback and 4K content from Netflix and other streaming providers.

Also Available: PANASONIC DMP-BDT380

SONY • UHP-H1 • BLU-RAY PLAYER

Play and stream anything you can imagine in superb quality, with 4K upscaling up to 60p and High-Resolution Audio.

Also Available: SONY BDP-S7200

FOR THE LATEST PRICES AND OFFERS VISIT WWW.SSAV.COM OR CONTACT YOUR LOCAL STORE

Bishop's Stortford 01279 506576
Bristol • 0117 974 3727
Brighton 01273 733338
Bromley 020 8290 1988
Chalfont St Peter • 0845 5046364
Cambridge 01223 304770
Chelsea • 020 7352 9466
Cheltenham • 01242 241171
Epsom • 01372 720720
Exeter • 01392 218895

Guildford 01483 536666
Holborn • 020 7837 7540
Kingston • 020 8547 0717
Leeds (Wetherby) 01937 586886
Loughton 020 8532 0770
Maidstone 01622 686366
Norwich • 01603 767605
Oxford 01865 241773
Reading • 0118 959 7768
Sevenoaks 01732 459555

Southampton • 023 8033 7770
Tunbridge Wells 01892 531543
Witham (Essex) 01376 501733
Yeovil • 01935 700078

CHORLEYWOOD - THIS STORE HAS RELOCATED TO CHALFONT ST PETER
VISIT WWW.SSAV.COM FOR ADDRESS DETAILS, OPENING HOURS AND BRANDS STOCKED

*THESE STORES ARE FRANCHISED AND OPERATE UNDER A LICENCE AGREEMENT TO SEVENOAKS SOUND & VISION

New Summer Issue

SELECT

Read Sevenoaks Select digital interactive magazine today!

www.ssav.com/select

Please Note: Some brands/products are not available at all stores. Special/added value offers are not in conjunction with any other offer (NICWAOO).

ADVERT VALID UNTIL 18/10/2016. E&OE

SEVENOAKS
SOUND & VISION



**HURRY
LIMITED
TIME
ONLY!**

Early Bird

CHRISTMAS SUBSCRIPTION OFFERS

Kick off the festive season by taking advantage of these fabulous discount offers when you buy your loved one a 12-month gift subscription to their favourite magazine. You could even treat yourself! (UK Print Only Offer)

- Choose from a range of magazines ■ Great savings
- Downloadable greetings card with gift subscriptions

Home Cinema Choice

13 issues for £42.30
Saving 35%
~~Full price £65.38~~

Hi-Fi Choice

13 issues for £40.50
Saving 35%
~~Full price £62.25~~

Hi-Fi News

13 issues for £40.50
Saving 38%
~~Full price £65.38~~

Subscribe securely online: <http://mymagazineoffers.co.uk/X360>

Call: 0344 243 9023* and Quote X360 **By Post:** Please complete the form below and post it to the address provided. Quote Ref: X360

YOUR DETAILS: (This section must be completed)

Mr/Mrs/Miss/Ms Name
Surname
Address
.....
Postcode
Country
Tel/Mob
Email
D.O.B
(Complete if the subscription is for yourself)
Magazine Price

GIFT SUBSCRIPTION: (Complete 'YOUR DETAILS' first)

Mr/Mrs/Miss/Ms Name
Surname
Address
.....
Postcode
Country
Tel/Mob
Email
D.O.B
(Complete if gift recipient is under 18)
Magazine Price

PAYMENT DETAILS

Please make cheques payable to MyTimeMedia Ltd and write code X309 and magazine title on the back.
☐ Postal Order/Cheque ☐ Visa/MasterCard ☐ Maestro
Cardholder's name
Card no:
(Maestro)
Valid from Expiry date Maestro issue no
Signature Date

SEND TO:

**MYTIMEMEDIA SUBSCRIPTIONS, My Time Media Ltd,
3 Queensbridge, The Lakes, Northampton, NN4 7BF**

TERMS & CONDITIONS: Offer ends 15th November 2016. UK Print Offer Only. All subscriptions will begin with the first available issue of 2017. For full terms & conditions visit www.mytimemedia.co.uk/terms. * Lines open Mon - Fri - 8.00am - 8.00pm GMT & Sat - 9.30am - 3.30pm GMT. Calls are charged at the same rate as standard UK landlines and are included as part of any inclusive or free minutes allowances. There are no additional charges with this number. Overseas calls will cost more. From time to time, your chosen magazine & MyTimeMedia Ltd may contact you regarding your subscription, or with details of its products and services. Your details will be processed in full accordance with all relevant UK and EU data protection legislation. If you DO NOT wish to be contacted by MyTimeMedia Ltd & your magazine please tick here: ☐ Email ☐ Post ☐ Phone. If you DO NOT wish to be contacted by carefully chosen 3rd parties, please tick here: ☐ Post ☐ Phone. If you DO wish to be contacted by carefully chosen 3rd parties, please tick here: ☐ Email

PLAYBACK

→ **SOFTWARE HIGHLIGHTS** **THE NICE GUYS** Russell Crowe and Ryan Gosling are naughty but nice in HD **CAPTAIN AMERICA: CIVIL WAR** Super-powered BD delivers plenty of spectacle **GODS OF EGYPT** The answer to your home cinema prayers? **THE HILLS HAVE EYES** The hills are alive with the sound of restored mayhem **ASH VS EVIL DEAD** Groovy! & MORE!



Games of thrones

Warcraft: The Beginning → Universal Pictures → All-region BD

The world's biggest videogame franchise has made the leap to the silver screen. But will it be struck down by the curse that has dogged most other game-to-film conversions? Find out as we give the Blu-ray a spin on p101.

HCC RATINGS KEY...	
Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

All prices quoted are approximate and may have changed

The *Nice Guys* started life as an idea for a TV series before being turned into a film



Retro noir is naughty but nice

The *Lethal Weapon*-writer pays tribute to '70s detective thrillers with one of 2016's funniest films



→ THE NICE GUYS

The search for a missing girl (Margaret Qualley) leads down-on-his-luck private eye Holland March (Ryan Gosling) into an unlikely partnership with hired enforcer Jackson Healey (Russell Crowe). But the further they look, the more trouble they get into. And where does the car-crash death of adult movie star Misty Mountains fit into the mystery?

Having demonstrated his love for detective fiction in 2005's *Kiss Kiss Bang Bang*, writer-director Shane Black is back in similar territory with this '70s-set comic thriller. Like that earlier film, *The Nice Guys* suffers a little from a fairly rambling structure that weaves its way through a Byzantine series of mysteries, but the combination of Black's dextrous wit and the superb chemistry between Gosling and Crowe ensure that you really won't mind.

Picture: The AVC 2.40:1 1080p encode's bold and colourful palette serves the '70s settings and fashions extremely well, while flesh tones are pleasingly natural. Blacks are also deep and inky – even if they do have a slight tendency to swallow up shadow detail from time to time.

Better yet is the meticulous detailing and inherent sharpness of the imagery, which together serve to highlight the intricate textures of the costumes, while also drawing attention to every wrinkle on Russell Crowe's face. Very nice indeed.

Audio: While *The Nice Guys* is hardly setting out to compete with the latest superhero blockbuster, that doesn't mean that this Blu-ray isn't capable of serving up an excellent lossless soundtrack.

While much of the film is built around the sharp dialogue (which, it must be said, is reproduced flawlessly), there are also plenty of shoot-outs, car chases and punch-ups to keep the entire DTS-HD Master Audio 5.1 mix engaged. So, as well as an expansive and dynamic front-end, the surrounds get plenty of use too, with sequences such as the encounter with an assassin in Chapter 9 impressing with the sound of bullets flying all around.

That said, even quieter scenes still benefit from convincing deployment of atmospheric effects across all channels. Also deserving of praise is the track's musicality, with both the score (by David Buckley and John Ottman) and the period-appropriate pop hits sounding terrific.

Extras: There are at least a few more extras here than were included on the Blu-ray Warner Bros. put out in the US last month, but it's still slim pickings.

Ported over from that US disc are two short featurettes: *Always Bet on Black* (about writer-director Shane Black) and *Worst Detectives Ever* (a more general *Making of...*). To this, Icon has added two theatrical trailers; a 10-minute reel of cast interviews; and a gallery of 19 stills and behind-the-scenes photos.



HCC VERDICT

The Nice Guys

→ Icon Film Distribution
→ Region B BD → £20

WE SAY: Forget about the lack of extras and simply enjoy one of the year's wittiest movies.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

Green Room

Altitude → All-region BD
£23



Patrick Stewart and the late Anton Yelchin star in this nifty siege thriller about a punk band who run afoul of a gang of murderous neo-Nazis at a backwoods bar. Not the most original film you'll ever see, but Jeremy Saulnier's *Green Room* is shocking, violent and darkly funny, with a mix of compelling performances and propulsive pacing making for gripping viewing. This HD platter's 2.40:1 1080p encode has no trouble handling the film's dark and dingy visuals, while the DTS-HD MA 5.1 track makes good use of the full soundfield. A commentary and 10-min *Making of...* are also included.



Narcos: Complete Season One

Arrow Films → Region B BD
£35



Spanning 1977 to 1992, this first 10-episode season of Netflix's drama about Pablo Escobar follows the notorious Colombian drug kingpin's rise to power and his 'incarceration' in La Catedral. It's addictive stuff, marred only by the trite English-language narration, which shows a surprising lack of faith in the audience's ability to engage with a predominantly subtitled series. While the show is available on Netflix in 4K, this 1080p Blu-ray stills holds its own visually. Extras include three featurettes, deleted scenes and three episode commentaries.



The Martian: Extended Edition

Twentieth Century Fox → All-region BD
£25



Despite running 10 minutes longer, this new 'Extended' version of Ridley Scott's sci-fi survival flick isn't *that* different from the original cut. However, while additions to the film itself may not be particularly substantial, the same cannot be said for the extras on this double-disc re-issue. As well as all of the earlier bonus features, we get a commentary from Scott, screenwriter Drew Goddard and novelist Andy Weir, deleted scenes and an engrossing 79-min *Making of...* documentary. Meanwhile, the film's 2.40:1-framed Full HD visuals and DTS-HD MA 7.1 audio remain as spectacular as ever.



A godawful mess of a movie

The decline of the filmmaker who once gave us the divine *Dark City* continues...

→ GODS OF EGYPT 3D

Like the bastard offspring of Marvel's *Thor* and Michael Bay's *Transformers* films, this fantasy epic takes place in an alternate version of ancient Egypt where the Gods live among humanity and are able to change into animal-headed metallic super-beings. And there's also a suspiciously large number of white people living there, too.

Truth be told, the ethnic white-washing of the cast is just one of the myriad problems that sink director Alex Proyas's would-be franchise starter. There's also the fact that the story is as hackneyed as they come and has no internal consistency from scene to scene, which makes for a hat-trick of terrible scripts from writing partners Matt Sazama and Burk Sharpless (*Dracula Untold* and *The Last Witch Hunter* being their previous crimes against cinema). And for a film that is so reliant on special effects to bring its characters and locations to life, *Gods of Egypt*'s gaudy CGI is surprisingly hit-and-miss.

Still, if you've ever wanted to see a digitally enlarged version of Oscar-winning actor Geoffrey Rush, dressed in a bath robe, cruising through the heavens in a magical golden space boat, and doing battle with an angry cloud with teeth, then *Gods of Egypt* will be right up your street. Everyone else, however, should give this mega-flop a wide-berth.

Picture: It was almost guaranteed that such a duff movie would look gorgeous: *Gods of Egypt*'s 'flat' AVC 2.40:1 1080p encode is a winner. While the sheer amount of CG used to create the locations results in a few softer-looking scenes, the overall impression you take away is one of brightly saturated colours,



exceptionally detailed textures and deep, dark blacks. And while some banding does make its presence felt in the film's finale, it's still not enough to spoil the fun.

The stereoscopic incarnation (which gets a disc to itself) is rather less successful. Not only is there the expected hit to brightness and colour saturation, but the 3D itself rarely makes telling use of the extra volumetric space.

Audio: This Blu-ray's DTS-HD MA 5.1 mix is expansive and dynamic. Throughout the film's two-hour run-time you're always grounded in the heart of the ludicrous action. Indeed, we'd have been happy to give it the full five stars if it wasn't for the fact that Lionsgate's US Blu-ray platter has a DTS:X track.

Extras: As well as two deleted scenes in pre-viz form, Entertainment One's HD disc throws together a little over an hour's worth of featurettes that provide a decent overview of the film's production.



HCC VERDICT

Gods of Egypt 3D

→ Entertainment One
→ Region B BD → £25

WE SAY: No matter how good it might look or sound in HD, *Gods of Egypt* is still a massive dud.

Movie: ★★☆☆☆

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★☆☆☆

DEMO SCREEN...

Captain America: Civil War

Time code: 094.10 – 105.39



Two tribes go to war: The film's big action set-piece finds the Avengers split and the two teams of heroes attempting to take each other down at a deserted airport. Cue the action...



Hitting the bullseye: Hawkeye and Ant-Man's teamup results in excellent use of 3D depth and plenty of sultry detailing as the tiny hero rides an arrow and then sneaks into Iron Man's suit.



A weight on his shoulders: The fight between Captain America and Spider-Man shows how well the encode handles fast-paced action and delivers some pretty stonking DTS-HD MA 7.1 sonics.



Giant-sized hero: Ant-Man shows off a new trick in order to buy Steve's team some more time. This sequence looks great in 3D and is accompanied by some excellent low-end heft.

A house divided...

A war between Avengers may be bad news for the Marvel Cinematic Universe, but it's great for fans of epic cinematic spectacle

→ CAPTAIN AMERICA: CIVIL WAR 3D

When an unfortunate accident during an Avengers mission in Nigeria leaves innocent people dead, the governments of the world decide that it is time to act. The United Nations proposes the Sokovia Accords as a way of providing political oversight for the team and removing its autonomy.

Still wracked with guilt over the Ultron incident, Tony Stark/Iron Man (Robert Downey Jr) quickly adds his support for the plan. However, following his earlier dealings with the World Security Council, Steve Rogers/Captain America (Chris Evans) is unwavering in his refusal to sign up.

Things go from bad to worse when 'Bucky' Barnes, aka The Winter Soldier (Sebastian Stan), is implicated in a terrorist attack. Determined to either prove his old chum's innocence, or at least bring him in alive, Cap now finds himself on the wrong side of the law. With the remaining Avengers divided over their reaction to the Sokovia Accords and their loyalties to Cap and Iron Man, the stage is set for a showdown between former friends...

Marvel Studio's commitment to long-form storytelling across its so-called 'Cinematic Universe' pays off fantastically well with this third *Captain*



America film. The emotional core of the story picks up from the end of *Captain America: The Winter Soldier* and deals with the hero's attempts to save his friend, yet the film also serves as an effortless culmination of story and character threads that have built across the entire series of films.

The reason that the schism between Captain America and Iron Man hits so hard on an emotional level is precisely because we've followed these characters as they developed across their various cinematic outings. As such, we understand exactly where both are coming from and feel the pain that comes from their division.

This being a superhero film, the rift between Cap and Iron Man doesn't just play out as a political debate. As much as the story may warn about collateral damage, it also serves up plenty of its own, with the central fight sequence between two teams of Avengers delivering some of the most inventive and awe-inspiring action ever seen. This truly is a comic book come to life.

Even more amazing is the way that *Captain America: Civil War* can juggle all of this (and the sizeable roster of characters it inherits), while

Team Stark or Team Cap
— which side are you on?

successfully introducing two brand-new heroes. The arrival of T'Challa/Black Panther (Chadwick Boseman) and Peter Parker/Spider-Man (Tom Holland) feels like a natural expansion of the MCU. More importantly, it drives the narrative forward rather than stopping it dead in its tracks, something that certainly afflicted *Batman v Superman: Dawn of Justice* when DC's expanding roster of heroes were awkwardly shoehorned into the story.

It's therefore easy to place *Captain America: Civil War* within the upper echelon of superhero films. Like other top-tier efforts *The Dark Knight* and *Captain America: The Winter Soldier*, this is a popcorn movie that understands the importance of balancing boisterous spectacle with thought-provoking storytelling. It is, basically, Marvel-ous. **Picture:** This stereoscopic Blu-ray release houses its 2D and 3D presentations on separate platters. Unsurprisingly, the 'flat' version delivers everything you'd expect from a big-budget digitally-shot title, including an abundance of fine details, bold colour saturation (check out Spidey's red and blue outfit) and satisfyingly deep blacks.

Despite being converted in post-production, the 3D version is one of the best such efforts Marvel has produced to date. Depth is appreciable throughout and there are even a few moments of negative parallax where limbs and weapons exceed the confines of the screen. There's a slight reduction in brightness and colour punch, but it's all worth it for the 15-minute airport brawl, which was shot using IMAX's new digital camera and in the 3D version opens up from 2.39:1 framing to 1.85:1 for an even more engrossing visual treat.

Audio: The lack of Atmos mixes on Marvel Blu-rays still disappoints, but this disc's DTS-HD MA 7.1 soundtrack doesn't. Packed with sonic subtleties, fluid channel transitions and capable of conjuring up seismic levels of LFE, *Captain America: Civil War*'s soundtrack is outstanding from start to finish.

Extras: This sticks to the usual pattern of extras for a Marvel/Disney Blu-ray, although does a little better than most by boasting a considerably longer *Making of...* documentary (split into two parts). Also included are a chat-track from the filmmakers, two short character featurettes, four deleted/extended scenes, a gag reel and a preview of the next MCU movie, *Doctor Strange*.



Expect the gang to get back together in time for 2018's *Avengers: Infinity War*



HCC VERDICT

Captain America: Civil War 3D

→ Walt Disney → All-region BD
→ £28

WE SAY: This superior superhero film hits Blu-ray with stunning visuals, explosive audio and great extras.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★



Arcade Action

Bigscreen home entertainment isn't just about movies anymore. **Team HCC** checks out a videogame vying for time on your home cinema system...



God Eater 2: Rage Burst

Bandai Namco Entertainment
→ PS4, PS Vita, PC → £45

Action-RPG *God Eater 2* has developed a sizeable fanbase in Japan since its release on the PlayStation Portable and PlayStation Vita back in 2013. Now, some three years later, Western audiences get the chance to see what all the fuss is about with a remastered *Rage Burst* version of the game that has been released on PS4, Vita and PC.

Set in a post-apocalyptic Japan, the game casts players as a member of the Blood Unit, a special division of the titular monster-smashing God Eaters, which handles the jobs that nobody else can. Armed with your God Arc (which transforms between a hilariously over-sized melee weapon and a really huge gun) you head out with a band of three fellow fighters to hack and slash your way through hundreds of monsters of ever increasing size and strength. Between missions you head back to base to get stuck into the phenomenal customisation options available for your character

and their weaponry. Rinse and repeat and that's basically your lot where gameplay is concerned.

Sure, it's repetitive, but that's the nature of this type of title. Far more troubling is that *God Eater 2*'s origins as a handheld game still shine through in this remaster, with the drab textures, low polygon count and muddy audio making it stand out for all the wrong reasons next to other PS4 titles.

This is a real shame, as there's a fun game that can swallow vast chunks of your life buried behind the lacklustre AV. We only hope that the inevitable *God Eater 3* will improve matters in this regard.



Legends of Tomorrow: Complete First Season

Warner Bros. → All-region BD
£40



Despite plenty of Easter Eggs for comic geeks and numerous VFX-packed action scenes, DC's new show about a team of time-travelling superheroes struggles to compensate for its uneven writing and performances. Still, there is one genuinely great episode (directed by Joe Dante) and things pick up a bit towards the end, which may bode well for the next season. This double-disc set offers up strong 1.78:1 Full HD encodes and DTS-HD MA 5.1 mixes for all 16 episodes, plus three behind-the-scenes featurettes, a Comic-Con panel and a gag reel.



Arrow: The Complete Fourth Season

Warner Bros. → All-region BD
£40



If a hero is truly defined by the quality of his villains then *Arrow* is onto a winner this year, with Neal McDonough's Damien Darhk proving himself to be the most charismatic and compelling bad guy to turn up in this show to date – although away from the battles with Darhk, this fourth season seems to spend as much time setting up *Legends of Tomorrow* as it does telling its own tales. While shadow detail sometimes drops off in darker scenes, on the whole this latest season of *Arrow* looks and sounds as good as ever on Blu-ray. Extras are three featurettes, deleted scenes, panel discussion and a gag-reel.



The Flash: The Complete Second Season

Warner Bros. → All-region BD
£40



DC's 'Scarlet Speedster' races back onto Blu-ray with 24 new episodes (including an episode of *Arrow* concluding a two-part crossover between the shows) that deliver plenty of HD thrills and spills. As with the first season, the impressively intricate 1.78:1 1080p visuals are bursting with rich primaries, while the DTS-HD MA 5.1 mix supports its fulsome front end with effective use of the surrounds. Abundant extras include deleted scenes, 19 *Making of...* vignettes, two Q&A panels and a 52-minute documentary covering the episode directed by Kevin Smith.



Dave was still upset that he missed out on a role in *The Lord of the Rings*



Fantasy epic works its magic

Long-awaited videogame adaptation finds the human soul in its cast of inhuman characters

→ **WARCRAFT: THE BEGINNING**

Thanks to the black magic wielded by leader Gul'dan (Daniel Wu), the orc homeland is dying. In an attempt to save it and keep building his power, the wicked warlock opens a magical portal to the world of Azeroth and manages to lead an orc raiding party through. There, the orcs begin capturing prisoners for a sacrifice large enough to open the portal to let the entire orc horde through.

Alerted to the attacks on settlements in his lands, King Wrynn (Dominic Cooper) sends trusted military commander Lothar (Travis Fimmel) and trainee mage Khadgar (Ben Schnetzer) to recruit the powerful Guardian Medivh (Ben Foster) in an effort to halt the orcs. Meanwhile, noble orc chieftain Durotan (Toby Kebbell) is having doubts about the true cost of Gul'dan's magic, while half-orc Garona (Paula Patton) finds herself trapped between the two sides in the upcoming war.

So, as you can probably tell, there's quite a bit going on in *Warcraft: The Beginning*. Fans of the best-selling MMORPG (massively multiplayer online role-playing game) that the film is based on may find it easy to jump right in, but non-gamers will initially find themselves lost in the film's tapestry of characters, kingdoms and magics.

Stick with it, though, as director/co-writer Duncan Jones

(of *Moon* and *Source Code* fame) ensures the heart of this flick remains its characters, be they human or orc. This keeps you invested in the big picture even when the little details and callbacks to the games leave you a mystified.

Ultimately, *Warcraft: The Beginning* has a soul to its storytelling that lifts it up above the usual videogame-to-film adaptations. If Jones could be convinced to return, we'd be interested to see where things go from here.

Picture: The movie looks absolutely perfect on Blu-ray. Framed at 2.40:1, the AVC 1080p encode is razor-sharp, bringing depth to the multitude of CG locations and life to the characters. The colour palette balances rich reds and greens with authentic browns and rustic tones.

Audio: Universal's Blu-ray arrives with a magnificent Dolby Atmos mix. Be it the sound of the energy rising up Medivh's tower (Chapter 3), a wolf jumping over your head from the rear to the front of the soundstage (Chapter 4) or the largescale battle between humans and orcs (Chapters 16 and 17), this misses no opportunity to thrill you with its clever spatial effects.

A magical audio experience...

Extras: An enjoyable spread of extras includes six *Making of...* featurettes; further videos about *Warcraft* fans and a Madame Tussauds exhibition; a VFX reel; the original 2013 teaser; the five-part *Bonds of Brotherhood* motion comic; and 11 deleted/extended scenes.



Warcraft only made \$47m in the US, but grossed more than \$220m in China



HCC VERDICT

Warcraft: The Beginning

→ Universal Pictures
→ All-region BD → £25

WE SAY: Stunning Full HD visuals and Dolby Atmos audio make this fantasy epic worth a spin.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★





Tales of monsters and missiles

Joe Dante's period comedy is a must-see for fans of vintage creature-features

→ **MATINEE**

This criminally overlooked 1992 comedy finds cult filmmaker Joe Dante crafting a love letter to classic 1950s monster movies set against the backdrop of the Cuban Missile Crisis.

Set in Key West in 1962, *Matinee* stars Simon Fenton as Gene, a teenage Navy brat who, along with his friends, has only two things on his mind: girls and B-movie producer Lawrence Woolsey (a superb John Goodman), who is premiering his new creature feature *Mant!* in the town. Add to this a teenage hoodlum up to no good and a town gripped by the very real fear of imminent nuclear annihilation and you have one heck of a combustible situation.

Picture: Unlike its 2014 Blu-ray release of Joe Dante's *The 'Burbs*, Arrow hasn't done its own restoration of *Matinee*. But here that's no bad thing as the 1.85:1-framed HD master is in pretty good shape. Detail levels are good throughout, colours are warm and there are no traces of print damage. Meanwhile, the black-and-white *Mant!* footage highlights the accuracy of the encode's contrast and brightness.

Audio: *Matinee*'s LPCM stereo mix is surprisingly effective. Dialogue is crystal-clear, while Jerry Goldsmith's playful score sounds as good as you could hope for. There's also plenty of range in the two-channel mix, as evidenced by the low-frequency 'Rumble-Rama' effects towards the movie's end.

Extras: Arrow has amassed lots of supplementary material for fans to sink their teeth (or mandibles) into. *Bit Parts! The Joe Dante Players* featurette focuses on several actors – Archie Hahn, Robert Picardo, Belinda Balaski, John Sayles and Dick Miller



– who often pop up in Dante's films. *Atomo-Vision! Making Matinee* chats to cinematographer John Hora and editor Marshall Harvey, while *Paranoia in Ant Vision* is a fascinating half-hour sit-down with Dante conducted for the French Blu-ray released by Carlotta Films in 2011 (don't worry, it's in English!).

Best of all is the inclusion of the complete edit of the *Mant!* movie, which runs to 16 minutes and includes a fair amount of footage that isn't seen in *Matinee*. This is accompanied by the full-length version of the *Mant!* trailer, once again containing some exclusive footage, and a short intro to *Mant!* from Dante.

Rounding things out are the original EPK featurette, a reel of behind-the-scenes footage, five deleted/extended scenes and the original theatrical trailer.

The first pressing of the Blu-ray also ships with an info-packed 20-page booklet.



HCC VERDICT

Matinee

→ Arrow Video → Region B BD & R2 DVD → £20

WE SAY: A great hi-def release that should bring this wonderful film the attention it always deserved.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

A Hologram for the King

Icon Film Distribution → Region B BD £20



Midlife crisis drama meets fish-out-of-water comedy in this bigscreen adaptation of Dave Eggers' bestseller.

Tom Hanks stars as the washed-up US businessman sent to Saudi Arabia to sell a new IT system to the king, only to find himself out of his depth and doubting his life choices. It's pretty sappy stuff, but Hanks is as charming as ever and there are glimpses of a sharper satirical comedy under all the sugar. The film looks great in hi-def on Blu-ray, serving up a bright and textured 2.40:1 1080p image. A 20-min *Making of...* is the only extra of note.



Dead-End Drive-In

Arrow Video → Region B BD £16



A young couple find themselves trapped in a drive-in cinema used to hold the undesirable and unemployed in this

entertaining Australian B-movie from 'Ozploitation' legend Brian Trenchard-Smith. Based on a new 2K restoration, Arrow's AVC-encoded 2.35:1 Full HD presentation of the film is an absolute treat, although for our money the real highlight of the disc is the director's 1978 public information safety film *Hospitals Don't Burn Down!*, which is every bit as gory and outrageous as any of his feature films. Other extras include a chat-track and a TV doc about Aussie stunt men.



Sid & Nancy: 30th Anniversary Edition

StudioCanal → Region B BD £23



Director Alex Cox's punk rock love story is no easy watch. But amidst all of the drug-addled

wretchedness are two superb performances from Gary Oldman and Chloe Webb that bring some much needed poignancy to the material. This hi-def platter delivers a grungy 1.85:1 1080p encode accompanied by well-resolved LPCM 2.0 sonics. Sadly, there's no sign of the brilliant chat-tracks from the old R1 or R2 DVDs, with the only extras being a trio of new interviews with Alex Cox, cinematographer Roger Deakins and DJ/filmmaker Don Letts.



Man of Steel

Warner Bros. → Ultra HD Blu-ray £30



Director Zack Snyder's Superman reboot came in for a bit of a kicking from some folks on its original release (not us,

we loved it), but even the harshest critics would have to concede that it's a more successful effort than this year's follow-up *Batman v Superman*. The visual upgrades offered by this 4K re-issue mainly come down to HDR, rather than the increased resolution; the shift from DTS-HD MA 7.1 to Dolby Atmos finds the barnstorming audio mix reaching new heights of excellence. This alone perhaps makes the disc a worthy upgrade for fans with the necessary setup.

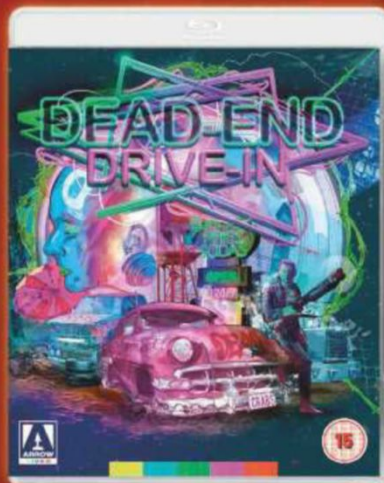




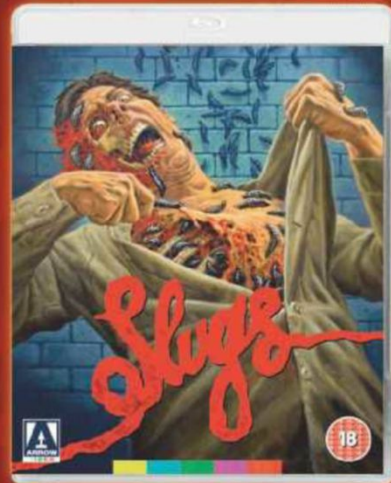
CLASSIC CULT FILMS IN DEFINITIVE EDITIONS OUT NOW AND COMING SOON



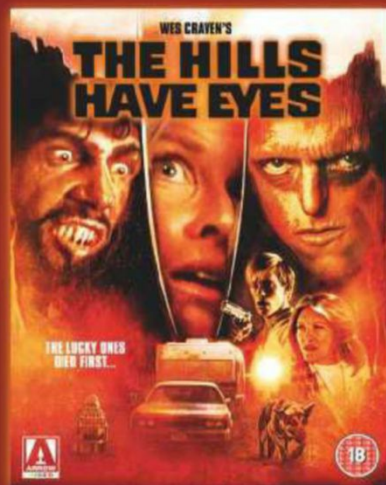
OUT NOW



OUT NOW



SEPTEMBER 26TH



OCTOBER 3RD



OCTOBER 10TH



OCTOBER 17TH

YOUR COLLECTION WOULDN'T BE COMPLETE WITHOUT THEM

FOR ALL THE LATEST INFORMATION ON UPCOMING RELEASES AND MORE VISIT:

WWW.ARROWFILMS.CO.UK



f /ArrowVideo

@ArrowFilmsVideo

ArrowVideo

YouTube /ArrowVideoUK

Maybe a chainsaw wasn't the best thing to use to open a tin of tomato soup...



One groovy horror-comedy!

Bruce Campbell's Deadite-slayer works just as well on the smallscreen as he did in the movies

→ **ASH VS EVIL DEAD: THE COMPLETE FIRST SEASON**

Hard as it may be to believe, it's been 35 years since Ashley J. Williams (Bruce Campbell) and his four doomed friends first journeyed to that isolated cabin in the woods in Sam Raimi's gore-splattered 1981 shocker *The Evil Dead*, and unwittingly unleashed an ancient evil on the world. Since then the character of Ash has developed a cult fanbase that has followed him through two equally iconic sequels (1987's *Evil Dead II* and 1992's *Army of Darkness*) and a host of comic book adventures (which continue to this day).

However, as time passed and Raimi graduated to far grander Hollywood projects, the idea of Ash ever returning to the screen for another outing seemed like something of an impossibility. All of which made it even more of a shock when the Starz Network announced that it had ordered a 10-episode TV series that would follow on from the films.

Picking up the story in the present day, the series finds Ash getting into trouble once again when he uses the Necronomicon to impress a girl. Naturally, it isn't long before the Deadites are back and making Ash's life a misery – but this time he's got a little extra help in the form of fellow ValueShop employees Pablo (Ray Santiago) and Kelly (Dana DeLorenzo).

With Sam Raimi onboard as producer (as well as writing and direct the pilot), alongside regular producing partner Robert Tapert and returning star Bruce Campbell, *Ash vs Evil Dead* feels every bit a



HCC VERDICT

Ash vs Evil Dead: The Complete First Season

→ Twentieth Century Fox
→ R2 DVD → £25

WE SAY: If importing the BD isn't an option, then this DVD release should still put a big grin on your face.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

natural continuation of the films. Meanwhile, the decision to do the show as half-hour episodes (except for the slightly longer season opener and closer) gives the series the relentless pace it needs, while ensuring that the over-the-top 'splatstick' mix of gore and gags never outstays its welcome.

Picture: Okay, let's get the obvious issue out of the way first: yes, it's incredibly disappointing that Fox has opted not to release *Ash vs Evil Dead* on Blu-ray in the UK. However, the show is already available on Region A BD from the US and a Region B BD is due to hit Australia at the end of October, so several import options exist if that's what you'd prefer.

As for this double-disc DVD release, the good news is that the anamorphic 1.78:1 transfers look better than expected. Obviously they're no match for actual Full HD encodes, but the SD imagery upscales well and is sharp and well-saturated, with very little in the way of aliasing or unsightly digital artefacts.

Audio: The show's Dolby Digital 5.1 mixes follow in the footsteps of their bigscreen predecessors and send forth a non-stop barrage of seamless surround effects and room-rattling LFE into your home cinema. It would be good stuff for a film, but coming from a TV show it's positively thrilling.

Extras: Each episode boasts a chat-track by various combinations of the cast (although series creators Sam Raimi, Ivan Raimi and Robert Tapert join Bruce Campbell for the pilot). They are, without fail, brilliantly funny and informative and come highly recommended. Also included are two promos and a reel of brief *Making of...* vignettes for each episode.

Canyon Passage

Panamint Cinema → Region B BD
£17



This 1946 Western stars Dana Andrews and Brian Donlevy as two pioneer friends in love with the same woman (Susan Hayward). The first colour film from director Jacques Tourneur, *Canyon Passage* is a deceptively complex drama whose darker inclinations are heightened by the filmmaker's predilection for filling his shots with impenetrable shadows. This welcome Blu-ray release offers an admirable 1.37:1 Full HD encode of the film's original Technicolor presentation, alongside a crystal-clear LPCM 2.0 dual-mono soundtrack. Vintage extras include newsreels, radio programmes and trailers.



Buster Keaton: Short Films 1917-1923

Eureka: Masters of Cinema
Region B BD → £40



British fans of 'The Great Stone Face' have not been particularly well served so far on Blu-ray – until now.

This comprehensive four-disc set houses all 32 surviving shorts Keaton appeared in up to 1923, including 13 'Fatty' Arbuckle films. While print damage abounds, the new restorations bring a previously unseen stability and clarity, as well as delivering the most complete versions of the films. The LPCM 2.0 scores are excellent, with five films offering a choice of two tracks. Extras include a look at the restoration process and a magnificent 184-page book.



Women in Love

BFI → Region B BD
£20



Another issue of HCC, another wonderful Ken Russell Blu-ray for fans of the provocative British filmmaker to

savour. This time it's the BFI's turn to join in the fun with a 4K restoration of the director's 1969 adaptation of D.H. Lawrence's novel. Not content with serving up a gorgeous (and technically flawless) 1.75:1-framed 1080p encode, the BFI's magnificent Blu-ray is also packed with extra goodies, including two chat-tracks, an isolated score, a 1982 audio interview with Glenda Jackson that plays over the film, and a new interview with cinematographer Billy Williams.



The Glass Key

Arrow Academy → Region B BD
£20



Are you under the impression that film remakes are a new thing? Think again.

Released in 1942, this was the second bigscreen adaptation of Dashiell Hammett's novel of the same name (the first having hit screens just seven years earlier). Thankfully, it fully justifies its existence by being a hugely enjoyable piece of film noir that improves on its predecessor in pretty much every way imaginable. This extremely welcome Blu-ray serves up a pleasing 1.37:1 Full HD presentation accompanied by cleanly-rendered LPCM mono audio. Lots of interesting, informative extras, too.



Long may he reign in Spain

Will this six-disc set satisfy UK fans left craving more of Almodóvar's work on Blu-ray?

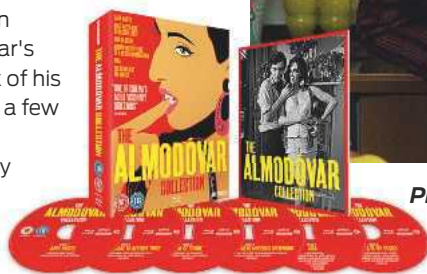
→ THE ALMODÓVAR COLLECTION

Despite being a leading light in world cinema since the 1980s, the work of Spanish filmmaker Pedro Almodóvar has been under-represented on UK Blu-ray. Indeed, until the arrival of this boxset, only his three most recent films had been released on hi-def platters over here.

Following a major restoration project covering all of Almodóvar's films, this boxset brings fans six of his early works (although there are a few notable gaps along the way)...

Although boasting a typically outrageous central idea, black comedy *Dark Habits* (1983) is a little too low-key to fully satisfy. *What Have I Done to Deserve This?*, released the following year, sees a huge step towards the Almodóvar fans know and love, with its offbeat and darkly funny critique of the contemporary treatment of women. Meanwhile, *Law of Desire* (1987) is a bold, energetic piece of explicitly gay melodrama starring a young Antonio Banderas.

Feminist screwball farce *Women on the Verge of a Nervous Breakdown* (1988) remains a highlight of his career and is the perfect starting point for novices to Almodóvar's work. *Kika* (1993), on the other hand, is a misjudged TV satire that raised critics' heckles on its release and even now seems surprisingly bitter. Up last is the perceptive melodrama *The Flower of Her Secret* (1995).



Picture: This BD boxset is based on a series of new restorations (from the original negatives, according to the press notes) and the results

certainly impress. While *Dark Habits* looks a little processed in a couple of scenes, the overall quality of the six 1.85:1 Full HD presentations is very good. Colours are robust, detailing is strong and there's plenty of native film grain to be seen.

Audio: All six films feature LPCM 2.0 and DTS-HD MA 5.1 versions of their original Spanish-language tracks. In all honesty, there's little to choose between them, with the 5.1 mixes rarely making any significant use of the surround channels.

Extras: The movies are joined by new retrospective featurettes, while all but *What Have I Done to Deserve This?* also get video intros by film critic José Arroyo. The two most recent titles in the set also feature a selection of archival interview clips.



HCC VERDICT

The Almodóvar Collection

→ StudioCanal
→ Region B BD → £60

WE SAY: Pleasing restorations make this box a must for fans – and leave us hoping for at least one more similar selection in the future.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★



Run to the hills, run for your lives!

Wes Craven's low-budget 1977 cannibal shocker gets the deluxe treatment on Blu-ray

→ THE HILLS HAVE EYES: LIMITED EDITION

The vacationing Carter family find themselves in a world of pain when car trouble leaves them stranded in the middle of the Nevada desert and targeted by barbaric cannibals. Cue the violence...

Wes Craven's second outing as a horror director sets up a clash between two families – one civilised, the other savage – in order to show how far people will go to protect themselves and the ones they love. It's a continuation of sorts to his earlier *The Last House on the Left* (1972). And yet, despite being another down and dirty slice of low-budget exploitation cinema, *The Hills Have Eyes* (1977) is a much more accomplished work. Not only does it strike a better balance between the onscreen horror and philosophical subtext, it also showcases the wicked sense of humour that would typify Craven's very best work in the years to come.

Picture: This Blu-ray may be based on a new 4K restoration supervised by producer Peter Locke, but there's only so much that can be done with *The Hills Have Eyes'* budget 16mm photography. So, despite an uptick in overall stability, clarity and fine detailing, there's still a handful of shots that appear slightly out of focus and witness a corresponding drop in resolution.

On a more positive note, colour reproduction is excellent, blacks are suitably deep and the swirling film grain is expertly resolved. The encode is also free from any obvious print damage.

Audio: There's no trace here of the remixed DTS-HD Master Audio 6.1 soundtrack that appeared on the



old Image Entertainment US Blu-ray. Instead, Arrow remains committed to presenting the soundtrack as it was original mixed, resulting in a slightly limited, but authentic LPCM mono track. It's not particularly exciting, but it's probably the best presentation the original mix has ever received.

Extras: Arrow has pulled out all of the stops with this Blu-ray's bonus goodies. Not content with porting across the best of the extras from previous releases (commentary by Wes Craven and Peter Locke, 55-min retrospective documentary, etc), the cult label has also crammed in plenty of new features. These include interviews with actor Martin Speer and composer Don Peake, previously unseen outtakes, two new chat-tracks and the chance to watch the film with the alternate ending.

This initial limited edition release features an exclusive 36-page booklet containing two new essays, plus a double-sided poster and six art cards.



HCC VERDICT

The Hills Have Eyes: Limited Edition

→ Arrow Video → Region A/B BD
→ £25

WE SAY: This scuzzy fright flick is no AV titan, but genre fans will still love this superb Blu-ray release.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

Cat People

Criterion Collection → Region B BD
£25



Produced by Val Lewton and directed by Jacques Tourneur, this 1942 film belies its exploitative title and reveals itself to be a smart and creepy piece of psychosexual horror.

Criterion's Blu-ray does this legendary chiller full justice with a pristine 1.37:1-framed 2K restoration getting the very best out of the film's noir-ish cinematography. The LPCM mono audio has also cleaned up well. Fascinating extras include a chat-track from film historian Gregory Mank, a 77-min documentary about Lewton and an archival interview with Tourneur. Put it all together and you have a practically purr-fect Blu-ray package.



Scream Queens: Season One

Twentieth Century Fox → R2 DVD
£30



Created by the folks behind *American Horror Story* (and *Glee*!) this comedy horror series finds a mysterious killer hacking and slashing his/her way through a university sorority. Played far more for laughs than scares, *Scream Queens* relishes the more ridiculous tropes of the horror and teen movie genres and gets its biggest laughs when sending them up. Denied a Blu-ray release on both sides of the Atlantic, this four-disc DVD set sports colourful anamorphic 1.78:1 transfers and punchy 5.1 audio. A handful of superficial extras add little value.



American Horror Story: Hotel

Twentieth Century Fox → All-region BD
£40



The Hunger meets *The Shining* with a bit of *Se7en* thrown in for good measure in this latest season of the TV horror anthology. This time the focus is a haunted hotel presided over by a sultry vampire played by Lady Gaga. While a coherent narrative has never been one of this show's strengths, *Hotel's* is easily the messiest to date – although a game cast and plenty of icky twists keep things enjoyable. As with previous seasons, the show looks and sounds fabulous in HD. Two short featurettes are the only extras.



Fuel your
passion for
sound and make
your music sing
OUT NOW!

THE ESSENTIAL GUIDE...

to getting the best possible sound
from your hi-fi, whether you're
buying, tuning or tweaking



twitter.com/HiFiChoiceMag



facebook.com/hifichoice.co.uk

Collecting...

L.A. noir

The Nice Guys is yet another example of Hollywood looking to its doorstep for noir-ish thrills. **Team HCC** picks out ten other movies on Blu-ray that find darkness in the City of Angels

CHINATOWN

Masterful 1974 noir flick from Roman Polanski with a youthful Jack Nicholson leading the cast as private eye Jake Gittes, struggling to unravel a mystery that mixes water, land deals and incest. Nicholson is thrilling as a man slowly realising he's out of his depth; viewers need sharp wits, too, to keep up with the multi-layered plot. A sequel released in 1990 (*The Two Jakes*) is less effective, but still worth a watch.

Get it: Paramount's 2012 region-free 2012 Blu-ray finds *Chinatown*'s imagery holding up well nearing forty years on, chucks in a 5.1 soundmix and rustles up a good bunch of (standard-def) extra features. Annoyingly, the UK release is extras-free. *The Two Jakes* is yet to make its hi-def debut.

Jake Gittes (Jack Nicholson): a private eye who follows his nose...



WHO FRAMED ROGER RABBIT

1940s Hollywood (albeit with the addition of cartoon characters living and working alongside humans) provides the backdrop to Robert Zemeckis' 1988 hit. It's a remarkable achievement, not least because *...Roger Rabbit* manages to be a family film with an undercurrent of murder, menace and film noir pastiche.

Get it: Fans had to wait until the film's 25th anniversary (2013) for a Blu-ray release, and Disney's frame-based restoration ensures it looks clean.



MULHOLLAND DRIVE

Possibly director David Lynch's most bonkers production yet, this surreal L.A. noir challenges you to watch it repeatedly to try to work out what exactly is going on. Or you could just admire its sheer bravado and outright weirdness...

Get it: A tale of two BDs. 2015's Region A Criterion Collection release uses a Lynch-supervised 4K transfer. Yet an earlier UK disc from Studio Canal offers a different batch of extras. Superfans may want to get both.



THE BIG LEBOWSKI

The Coen brothers' hilarious comedy plays up the tropes of the noir genre with its momentum-gathering plot, and even its title alludes to a Bogarde classic (see opposite). German Nihilist kidnappers, a ten-pin bowler called Jesus, an unknown narrator – *The Big Lebowski* is a flick packed with oddities.

Get it: Universal seems intent on releasing this multiple times on Blu-ray with different artwork, but all with seemingly the same transfer. So feel free to pick up the cheapest one you can find.



PREDATOR 2

This blood-splattered sequel could have been set anywhere, yet Los Angeles was pegged as the location for its story of an extra-terrestrial on the run, with the sprawling city awash with rampant drug gangs and sweltering in heat. Danny Glover's hat-wearing detective Harrigan is a futuristic Philip Marlowe, slowly unearthing the alien's secrets.

Get it: While the original is still in need of a worthwhile BD release, *Predator 2* was put out in hi-def in 2008 without a hiccup. Solid AV quality and bonus bits.



KISS KISS BANG BANG

Nice Guys director Shane Black ploughs a similar furrow in this good-looking 2004 private eye thriller starring Robert Downey Jr and Val Kilmer. Not a hit at the box office, but it's one of the smartest, funniest genre outings around, and Black fans will appreciate its Christmas-time setting and razor-sharp dialogue.

Get it: *Kiss Kiss Bang Bang* hasn't had the home media treatment that many think it deserves. Warner's 2006 Blu features an MPEG-2 transfer, lossy DD 5.1 audio and a chat track with Black, Kilmer and Downey Jr.



L.A. CONFIDENTIAL

A superior slice of noir based on a novel by literary legend James Ellroy (also the writer of *The Black Dahlia*), featuring Russell Crowe, Guy Pearce, Kim Basinger and Kevin Spacey amongst its heavyweight cast. The combination of exquisite 1950s-evoking production design, sterling performances, efficient cinematography and a gripping, twisty narrative make this a practically faultless two-and-a-bit hours.

Get it: Grab the double-disc Blu-ray that ports over plenty of extras from the previous DVD edition.



COLLATERAL

Michael Mann bravely casts Tom Cruise as a ruthless professional hitman in this night-time set thriller that tours the glitzy streets of modern-day L.A., using digital photography to give it an uneasy air of realism, and features Mann's typical eye for stunning cityscapes. And look out for a cameo from Jason Statham that suggests a shared universe with *The Transporter* franchise!

Get it: The 2010 Blu-ray from Paramount looks superb and is packed with informative supplementary features, not least Mann's detailed director's commentary.



TO LIVE AND DIE IN L.A.

Like *The French Connection*, *To Live and Die in L.A.* finds director William Friedkin in hard-boiled thriller mode, with William Petersen excelling in the role of a Secret Service agent seeking revenge on the hoodlum who killed his partner, whatever the cost. Cue a downbeat tale of murder, a gigantic freeway car chase, electronic score and glorious on-location imagery.

Get it: There's a good region-free US release, but those looking to own for the first time may want to wait until Arrow Video's UK BD debut this November.



THE BIG SLEEP

Private detective Philip Marlowe (created by novelist Raymond Chandler) is a staple of Hollywood noir flicks (see also *The Long Goodbye*, *Farewell My Lovely*). In this 1946 classic, the fast-talking PI (played by Humphrey Bogarde) becomes mixed up with Lauren Bacall's femme fatale. Yet that description only touches the surface of this dizzying, complex mystery, deftly directed by Howard Hawks.

Get it: Still not available on UK BD, but the US release under the Warner Archive Collection label is region-free so safe to import. Pleasingly, this includes both the theatrical cut and (in standard-def) the pre-release version that was rediscovered in the 1990s.

Have we missed your favourite L.A. noir movie?
Let us know: email letters@homecinemachoice.com

Missed an issue?

Have you missed a copy of *Home Cinema Choice*? You can now order these online or over the phone



Issue No.253



Issue No.254



Issue No.255



Issue No.256



Issue No.257



Issue No.258



Issue No.259



Issue No.260



Issue No.261



Issue No.262



Issue No.263



Issue No.264

Order Online:
<http://mags-uk.com>

Please note that we cannot guarantee the availability of all issues displayed above.



SELECT

→ **GEAR GUIDE** **TELEVISIONS** From entry-level 40in LEDs to flagship 4K monsters
BLU-RAY PLAYERS Which deck rules the roost? **PROJECTORS** It's time to blow up your video!
AV RECEIVERS 5.1, 7.1, 9.2 – we've got all the options covered **SPEAKERS** Killer surround sound setups
for all rooms and budgets **PVRs** Including super-slim Freeview boxes and Sky Q **AND MORE!**













**LOOKING
FOR A NEW
FLATSCREEN?**
Our **Top 10**
guide is here
to help

HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

All prices quoted are approximate and may have changed

TOP 10 Televisions

- 
Panasonic TX-65DX902B → £3,300 ★★★★★
 This HDR-capable 65-incher wears its Ultra HD Premium certification with pride, and employs a full-array backlight to take control of its impressive luminance talents. Imagery is excellent; overall styling is appealing too. *HCC #259*
- 
LG OLED65G6 → £6,000 ★★★★★ NEW ENTRY
 An essential audition if your pockets are deep enough – this super-slim flat OLED TV combines the tech's PQ charms with a stunning design and nuanced sound performance. *HCC #264*
- 
Sony KD-75XD9405 → £5,000 ★★★★★
 For this 75in HDR flagship, Sony adopts a full array LED backlight. The result is a step-up in image quality over smaller, edge-lit siblings. A big, bold – and expensive – TV. *HCC #261*
- 
LG OLED55C6 → £3,000 ★★★★★
 LG's 2016 OLED line includes Dolby Vision HDR playback and improved luminance – the result is a superb all-round (curved) 4K display that astonishes with its contrast charms. *HCC #262*
- 
Samsung UE55KS9000 → £2,100 ★★★★★
 Samsung's quantum dot/edge LED 4K/HDR looker claims UHD Premium certification. Image quality is routinely great, but light banding can distract and 3D is absent. *HCC #260*
- 
Philips PUS7601 → £2,000 ★★★★★
 This 65-incher undercuts other rivals with direct LED backlights. Misses out on the colour finesse of more advanced HDR TVs, but still offers plenty of visual bang for your buck. *HCC #263*
- 
Sony KD-55XD9305 → £2,000 ★★★★★
 Slim-line Android TV that dazzles with its smart design. New backlight tech promises HDR fireworks, but it's not the most subtle when it comes to illumination. *HCC #260*
- 
Panasonic TX-50DX750 → £1,300 ★★★★★
 Mid-range 4K/HDR LED TV. Not as impactful as its DX902 stablemate when it comes to pictures, but a neat design, fun UI and appealing screen size will win it plenty of fans. *HCC #260*
- 
Hisense 65XT910 → £2,300 ★★★★★
 The Chinese marque throws down the UHD/HDR gauntlet to its better-known rivals with this big, well-priced, high-spec TV. Bright and clear images, but short on motion subtlety. *#257*
- 
Hitachi 49GHT69U → £500 ★★★★★
 49in 4K screen that could appeal to those on tight budgets. This £500 set offers a smattering of catchup, decent connectivity and a generally enjoyable image. No HDR support, though. *HCC #260*

TECH INFO: TELEVISIONS



What? No plasma?: The TV market is now dominated by LED-lit LCD screens. Manufacture and sale of plasma display panels (PDPs), which previously came into play above 42in, has ceased. With LED comes newer technologies. 4K models with a native resolution of 3,840 x 2,160 should at least be on your audition list if you're thinking of a new display; curved models are a consideration if you want to impress the neighbours. Look out for sets offering support for HDR content, which is part of the UHD Blu-ray spec.



Active or Passive: At the beginning of the 3D era, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver full-res images to each eye. Passive 3D TVs, which are now more common, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). The same halving occurs with a 4K screen. Some brands offer both Passive and Active models, depending on the panel used. Glasses-free 3D, heralded by Toshiba's early ZL2 TV, hasn't caught on. The tech is still being worked on, though.

TOP 5 Blu-ray movies

**The Revenant**

Leonardo DiCaprio excels in this brutal period survival drama, and it arrives on UHD Blu-ray with an HDR10 encode that relishes the naturally-lit cinematography. Masterful DTS-HD mix, too, but more extras would be nice.

★★★★★

**Batman v Superman: Dawn of Justice**

Either a brilliantly epic, Easter Egg-laden superhero fest, or an overwrought misfire from DC/Warner Bros. Either way, the Ultra HD Blu-ray release is a corker.

★★★★★

**The Jungle Book 3D**

Disney waves its live-action wand at Rudyard Kipling's famous tale of a boy and some beasts. Family fun that's stunning to look at (although the 3D presentation isn't as pleasing as its 2D partner).

★★★★★

**Zootropolis**

Disney's great run of CG 'toons continues in this layered, politically subversive animals-as-cops tale. The 2.40:1 image quality is simply gorgeous, while the DTS-HD MA 7.1 soundmix bristles with activity.

★★★★★

**Deadpool**

Not a comic book caper for kiddies, this hyperactive, foul-mouthed smash hit lands on Ultra HD Blu-ray with aggressive Dolby Atmos sonics and a plethora of mirthsome extra features.

★★★★★

TOP 10 Blu-ray players

- 1**  **Panasonic DMP-UB900 → £600** ★★★★★
 Boom! The Ultra HD Blu-ray format gets an inspiring debut in Panasonic's multi-talented deck that offers welcome user tweaks and a sterling picture performance. Smart skills include 4K-enabled VOD apps. *HCC #259*
- 2**  **Oppo BDP-103D → £600** ★★★★★
 This deck adds Darbee Visual Presence processing to the already excellent AV skills of its BDP-103EU predecessor. Superb construction, usability and features/connections. *HCC #228*
- 3**  **Pioneer BDP-LX88 → £1,100** ★★★★★
 The Japanese corp returns to the disc-playing high-end with a universal deck that weighs more than your AVR and drips with user tweaks and processing features. Stonking performer. *HCC #246*
- 4**  **Oppo BDP-105D → £1,100** ★★★★★
 This heavyweight deck builds upon the premium picture performance of the BDP-103D with a wealth of audiophile upgrades – if you're serious about music, check it out. *HCC #234*
- 5**  **Sony UHP-H1 → £400** ★★★★★
 Likely to be its last top-line BD deck before Sony embraces UHD, this player pleases with wide-ranging audio support (including DVD-A!), exquisite construction and slick performance. *HCC #261*
- 6**  **Arcam FMJ UDP411 → £1,200** ★★★★★
 Pristine visuals – including upscaled SD – and a classy sonic performance grant this Arcam instant appeal. The design and build is commensurate with the premium price tag. *HCC #244*
- 7**  **Sony BDP-S7200 → £180** ★★★★★
 A Sony deck without the curious angular design, the BDP-S7200 offers SACD support, hi-res audio streaming and 4K upscaling that's worth investigation. Not too pricey, either. *HCC #239*
- 8**  **Cambridge Audio CXU → £900** ★★★★★
 Styled to match the brand's other CX components, this universal deck matches its audio and video chops with plenty of features, including Darbee and HDMI switching. *HCC #253*
- 9**  **Samsung UBD-K8500 → £430** ★★★★★★
 Ultra HD Blu-ray player that'll find fans courtesy of its sensible price point, connected smarts and eye-catching visuals. Build quality is a little uninspiring. *HCC #260*
- 10**  **Samsung BD-J7500 → £150** ★★★★★★
 This well-priced spinner offers twin HDMI outputs and multichannel phono audio for flexible system hookup, an appealing design, smart features and solid AV chops. *HCC #247*

TECH INFO: BLU-RAY PLAYERS

Matching your deck to your AV receiver: Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D/4K/HDR output signals, in which case you'll need a deck with dual HDMI outputs – one channelling audio to your receiver amp, the other piping video direct to your TV.

What about the PlayStation?: Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £150 PS3 Super Slim makes a decent choice – especially if you like playing games. Control via a joypad is a pain, though, and the console runs more noisily than most BD spinners. The more expensive PS4 is a much better gaming machine, and now available in a 1TB version.



DEMO DELIGHT

Batman v Superman: Dawn of Justice: Zack Snyder's dark and stylised photography looks pretty spiffy on Warner's Ultra HD Blu-ray release, with both the resolution uptick and HDR grading resulting in a finely-etched image with explosive contrast.

OPPO®
Blu-ray

At the top of everyone's shortlist



TOP 10 Projectors

**Sony VPL-VW520ES** → £8,800

The top dog in Sony's domestic SXRD projector range, this couples native 4K optics with HDR compatibility for a state-of-the-art performance. Capable of jaw-dropping imagery and offers plenty of install flexibility. *HCC #254*

**JVC DLA-X7000** → £5,700 ★★★★★

With contrast and brightness improvements over the more affordable DLA-X5000, this is a great bigscreen option, although its SDR performance impresses more than HDR. *HCC #259*

**Sony VPL-HW45ES** → £1,850 ★★★★★

The most affordable model in Sony's home cinema range, the Full HD-resolution 45ES features excellent light management for a routinely cinematic image. Great value. *HCC #263*

**Epson EH-TW7200** → £1,800 ★★★★★

Priced to appeal to those unable to dabble in the £3,000 market, Epson's mid-ranger is a great purchase. No frame interpolation on offer, but colours, contrast and brightness impress. *HCC #232*

**ViewSonic Pro7827HD** → £600 ★★★★★

Pictures impress from this single-chip DLP budget option that carries a third HDMI input designed for smart sticks. Includes ISF calibration and 12V trigger. 3D spex are an optional extra. *HCC #261*

**JVC DLA-X5000** → £4,000 ★★★★★

Fourth-gen eShift projector marries its pixel-shifting talents with a contrasty performance, HDR support and HDMI 2.0a. Not the smoothest with motion, and price tag is considerable. *HCC #257*

**Optoma GT5000** → £1,000 ★★★★★

Ultra short-throw model with healthy brightness that makes sense for regular living rooms where a traditional install isn't possible. Casts Full HD images from just 30cm. *HCC #261*

**BenQ W2000** → £800 ★★★★★

Average black-level performance limits this model's all-round appeal, but elsewhere this Full HD DLP budget PJ catches the eye with its calibration options and detailed visuals. *HCC #257*

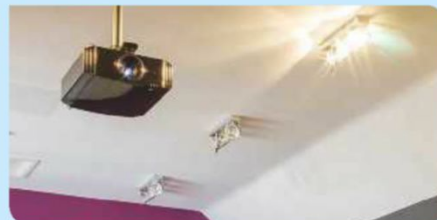
**Optoma HD27** → £800 ★★★★★

Another budget beamer where black levels aren't exemplary, but there's plenty to like here including the small form factor and vibrant colours. Limited zoom of 1.1x. *HCC #264*

**Philips Screeneo 2.0** → £1,500 ★★★★★

Philips retools its ultra short-throw PJ to now offer a Full HD resolution. Enjoyable imagery and easy setup, but some may miss the media player/LED lamp of its predecessor. *HCC #262*

TECH INFO: PROJECTORS



Installation: Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

Throw distance: Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

Throw ratio: Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

Award-winning home cinemas

At Cyberhomes our home cinemas and smart home installations aren't just about the amazing 4K picture and immersive Dolby Atmos® sound. We can also implement the acoustic treatments, lighting control, seating, the intuitive Savant Pro or Control4 control system, and so much more.

For details visit www.cyberhomes.co.uk/hcc



Home cinema design and installation • Lighting control systems
Multi-room audio and video • Home automation

0333 344 3718

hello@cyberhomes.co.uk

www.cyberhomes.co.uk

TOP 10 Speakers



1 Monitor Audio Gold 300AV → £7,150



MA revamps its Gold Series and we pay serious attention. This big-ticket package excels across the frequency range, offers exquisite design and packs setup flexibility via the dipole/monopole FX surrounds. *HCC #251*



2 Q Acoustics 3000 5.1 Cinema Pack → £700 ★★★★★

A superior compact package with driver improvements over the previous 2000i series. The two-way cabinets and dual-driver sub combine to offer impressive audio for the money. *HCC #247*



3 XTZ Cinema Series 5.1.4 → £3,700 ★★★★★

Spectacular dynamics, gut-thumping bass and a sense of scale that most systems at this price only dream of – XTZ's 3D audio-ready setup is an easy recommendation. *HCC #259*



4 KEF R Series 7.1 → £6,500 ★★★★★

A 7.1 array mixing dipolar and direct surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. *HCC #217*



5 Monitor Audio Bronze B5 AV → £1,500 ★★★★★

Like their Gold siblings, these feature switchable surround speakers and MA's C-CAM drivers. Smaller in stature and output, but eminently more affordable. *HCC #254*



6 Wharfedale Diamond 220 HCP → £850 ★★★★★

This package offers a lot for less than a grand – two-way surrounds, a potent three-driver centre channel and agile subwoofer. Great movie sound and excellent build. *HCC #248*



7 ELAC Debut 5.1.2 → £1,950 ★★★★★

Well-priced floorstanding Atmos system that manages to balance subtlety and precision with an exciting delivery. Subwoofer includes app-based room EQ. *HCC #262*



8 DALI Opticon 5.1 → £3,200 ★★★★★

The Opticons employ driver designs created for DALI's higher-end models, and showcase a talent for both involving music presentation and high-octane home cinema. *HCC #260*



9 Dynaudio Emit 5.1 → £3,200 ★★★★★

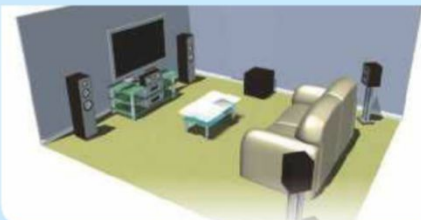
Entry-level for Danish brand Dynaudio – still a hefty chunk for a 5.1 array. What the money gets you is a wonderfully natural and cohesive soundstage and stonking build quality. *HCC #263*



10 Q Acoustics Concept 5.1 Cinema Pack → £1,750 ★★★★★

Step-up Q Acoustics offering with handsome floorstanders joined by standmount surrounds employing the Concept Gelcore construction. Classy, consistently neutral performance. *HCC #257*

TECH INFO: SPEAKERS



Centre speaker: Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

Front speakers: Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

Subwoofer: Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

Surrounds: Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

DEMO DELIGHT

Deadpool: A bonus treat for buyers of this flick on Ultra HD Blu-ray (as it's not included on the 1080p platter) is Fox's first Dolby Atmos track. The soundmix keeps pace with *Deadpool*'s visceral, kinetic approach, proffering hyperactive effects placement, appreciable soundstage depth and a rich, boisterous LFE channel.



Star ceiling specialists

www.starscape.co.uk

info@starscape.co.uk 01289 332900



Photo courtesy of UK Home Cinemas

TOP 10 AV Receivers/AV Processors

**Onkyo TX-NR3030** → £2,000

★★★★★

The big daddy of Atmos AVRs, this 11-channel design enables four height speakers to be added to an existing 7.1 array with ease. Lithe on its feet and with exemplary steering, this is multichannel audio at its best. *HCC #245*

**Denon AVR-X7200WA** → £2,500 ★★★★★

Now upgraded to DTS:X, and sporting HDCP 2.2 support, this Atmos AVR is as futureproofed as it gets. Only a nine-channel design, though. *HCC #248*

**Arcam AVR850** → £4,500 ★★★★★

High-end seven-channel AVR marrying Class G amplification and Atmos (and future DTS:X) support with talented Dirac Live Room EQ. 11-channel pre-outs for full-fat setups. *HCC #257*

**Marantz AV8802A** → £3,350 ★★★★★

This 11.2-channel next-gen processor (Atmos, DTS:X and Auro-3D) is an obvious upgrade for a high-performance separates system. Luxuriant, natural sound quality. *HCC #253*

**Trinnov Audio Altitude32** → £27,000 ★★★★★

Capable of outputting 32 discrete channels and mapping Dolby Atmos, DTS:X and Auro-3D sources to any setup via advanced EQ. Only premium cinema owners need apply, though. *HCC #262*

**Marantz SR7010** → £900 ★★★★★

Featuring typically sultry Marantz styling, this 9 x 125W receiver has an extensive feature roster (hi-res networking, object-based audio, etc) and a smooth, cohesive soundstage. *HCC #261*

**Denon AVR-X2300W** → £500 ★★★★★

This almost entry-level Denon offers excellent value for money, with a well-balanced sound signature and bulging feature set. Seven-channel design won't suit all setups. *HCC #263*

**Yamaha RX-A3060** → £2,000 ★★★★★

New nine-channel flagship from Yamaha features excellent room EQ implementation, well-judged DSP modes, and an even-handed, effortless sound. *HCC #264*

**Cambridge Audio CXR120** → £1,500 ★★★★★

This Brit-designed 7.2-channel receiver focuses on performance and ignores object-based audio and built-in Bluetooth. Sound quality is assured and construction is monstrous. *HCC #251*

**Onkyo TX-RZ800** → £1,050 ★★★★★

Feature-packed (DTS:X, HDCP 2.2) and sporting a new, clean design, Onkyo's mid-priced nine-channel AVR is easy to use and sounds sprightly, if a little short on aggression. *HCC #253*

TECH INFO: AV RECEIVERS



Tackling new heights: A recent innovation in AVR circles is the introduction of Dolby Atmos, the object-based sound format that has taken off in commercial cinemas and is supported in the home by the likes of Onkyo, Pioneer, Denon, Marantz and Yamaha. This requires new height speakers in addition to a regular 'flat' 5.1 or 7.1 speaker configuration. The heights can either be physically mounted in/on your ceiling, or provided via up-firing reflective models. Setup can be complex, but the results are certainly impressive. Atmos-encoded Blu-rays are a bit thin on the ground, but you can use Dolby Surround post-processing with regular 5.1/7.1 soundtracks to get the most from your new AVR/speakers. Rivals to Atmos are Auro-3D, which uses height speakers in a different configuration, and DTS:X. Most AVR brands have pledged support for the latter; software is beginning to arrive.

How much power?: Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

TOP 5 Bonus features

**The Trouble with Titian Revisited**

Arrow Video's Blu-ray of '60s Roger Corman horror *Blood Bath* includes four different cuts of the movie plus an 81-minute doc helping you make sense of its bizarre production history.

★★★★★

**Secrets of the Force Awakens...**

This 70-minute *Making of...* feature accompanying the latest *Star Wars* flick is essential viewing for franchise fans, going into detail about director JJ Abrams' production processes.

★★★★★

**Tales from the Bowling Alley**

Joining 88 Films' BD of *Sorority Babes in the Slimeball Bowl-O-Rama* is this monster 137-minute doc comprised of archival on-set footage. It even has its own optional chat track.

★★★★★

**The Life, Legacy and Legend of Don Borchers**

Brilliant documentary addition to the *Children of the Corn* Trilogy boxset focusing on the career of producer Don Borchers. Stuffed with insight, humour and Hollywood tales.

★★★★★

**Production Diaries**

A bumper collection of featurettes accompanying *Bad Boys II* on BD. Image quality may be standard-def, but there's plenty of input here from Bay and insight into his madcap filmmaking world.

★★★★★

TOP 10 Subwoofers

- 
SVS SB-2000 → £600 ★★★★★
 This follow up to the SB-1000, which incorporates a new 12in driver and revamped Sledge DSP amplifier, offers immense value for money. A mid-sized woofer that imbibes your Blu-rays with potent LFE, the SB-2000 sounds quick and taut, and is a perfect introduction to what a truly good sub can accomplish. *HCC #233*
- 
REL 212SE → £2,750 ★★★★★
 Lush design joins engineering nous in this premium sub with two active 12in drivers supported by a pair of passive radiators. Loud, deep and impactful, your BDs are in safe hands. *HCC #246*
- 
JL Audio Fathom f212v2 → £6,500 ★★★★★
 A second-gen outing for JL's 2 x 12in monster, with an increase in power (now 3,600W) and improvements to the room EQ system among the changes. Sounds as good as you'd imagine. *HCC #261*
- 
REL S/3 SHO → £1,450 ★★★★★ NEW ENTRY
 The 10in, 400W S/3 is part of REL's revamped 'Super High Output' Serie S line. Performance is excellent, with speed, control and a scale bigger than you might expect. *HCC #264*
- 
Bowers & Wilkins PVID → £1,200 ★★★★★
 One of the coolest-looking subs on the planet, B&W's PVID uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. *HCC #212*
- 
BK Electronics P12-300SB-DF → £475 ★★★★★
 Bass heads can get outrageous value for money in the shape of BK's overperforming 12in sub. A front-firing model is also offered, and other finishes knock the ticket down to sub-£400. *HCC #247*
- 
ELAC SUB 2070 → £1,300 ★★★★★
 A dual-driver, 600W sealed sub with control and onboard EQ system driven by a free Android/iOS app. Meaty, assured performance, with useful tweaks offered. *HCC #261*
- 
JL Audio Dominion d108 → £900 ★★★★★
 Compact subwoofer that employs an innovative 8in driver (and a 500W amp) to go bigger and deeper than you might imagine. Compatible with JL Audio's JLink wireless system. *HCC #260*
- 
Eclipse TD520SW → £3,000 ★★★★★
 This twin 8in woofer, driven by ICEpower amplification, aims for ultimate speed and tone – and succeeds. Simply put, the TD520SW is worth every penny of its asking price. *HCC #249*
- 
Artison Nano 1 → £800 ★★★★★
 Artison's media room-friendly woofer tucks twin 6.5in bass drivers and a 300W amp into its compact frame. Bass extension isn't the deepest, but this is tight, fast and heaps of fun. *HCC #253*

TECH INFO: SPEAKERS



Why use more than one sub?: Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book *Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms* is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

DEMO DELIGHT

San Andreas: This brilliantly over-the-top SFX-heavy disaster flick magicks up a scenario where both downtown Los Angeles and San Francisco (not to mention the Hoover Dam) are hit by mega earthquakes, and its Atmos mix is subsequently loaded with LFE. Buildings topple and pavements tear apart with real fear-inducing weight, keeping your sub on its toes for much of the 110-minute running time.

TOP 5 Console games



Tom Clancy's The Division
 Ubisoft's long-gestating online multiplayer RPG/shooter proves worth the wait, courtesy of its well-realised future New York environment, varied gameplay (including solo missions) and grin-inducing weaponry. ★★★★★



LEGO Star Wars: The Force Awakens
 Brilliant arcade puzzler (with some light action) that makes great use of *Force Awakens'* set-pieces and chucks in other levels set further afield in the *Star Wars* universe. ★★★★★



Dead Souls III
 Third-person action-filled fantasy sequel with excellent visuals (particularly the terrifying bosses) and improved game mechanics over previous entries in the franchise. Challenging – but rewarding – gameplay. ★★★★★



No Man's Sky
 Massive, intergalactic exploration that feels like a cross between *Minecraft* and *Elite Dangerous*. Relaxed, absorbing gameplay with a gorgeous 50s/60s sci-fi aesthetic and beautiful orchestral score. Odd but fun. ★★★★★



Uncharted 4: A Thief's End
 The final entry in this blockbuster franchise is simply epic, both in terms of gameplay (driving, puzzle-solving, stealth battles...) and the exquisite 1080p visuals. Roll on next year's movie adaptation! ★★★★★

TOP 10 Accessories

- 1 KEF R50 → £600 ★★★★★**
 KEF's Dolby Atmos-enabled reflective modules are a smart choice for anyone looking to beef up their speaker system. Using the company's Uni-Q point source drivers pays real dividends, enabling full-range sonics that reach deep into your cinema room. Styling and build quality are first rate. £600 gets you a pair – you'll soon want four... *HCC #252*
- 2 Amazon Fire TV 4K → £80 ★★★★★**
 Amazon reboots its media player to include 4K video prowess, greater storage capability and a souped-up engine. The result is an intuitive add-on that's ideal for 4K TV owners. *HCC #254*
- 3 Nvidia Shield Android TV → £150 ★★★★★**
 The Android TV platform gets the hardware it deserves – this stylish set-top box offers potent processing, resulting in a slick gaming and media playback experience. 4K capable. *HCC #262*
- 4 Asus RT-AC87U → £160 ★★★★★**
 A high-spec router can help you get the best from home media streaming – this feature-laden dual-band Asus impresses with speed and range and customisation options. *HCC #259*
- 5 QNAP HS-251 → £300 ★★★★★**
 Adding HDMI connectivity to a NAS device is surprisingly useful – and this slim-line model from QNAP is styled to grace your living room. Flawless media playback and responsive. *HCC #248*
- 6 Logitech Harmony Elite → £270 ★★★★★**
 Flexible and relatively easy to set up, this all-in-one remote package combines touchscreen handset and hub with smart device app. Worthwhile if you have a stacked kit rack. *HCC #256*
- 7 Xbox One S → From £250 ★★★★★**
 The retooled Xbox One adds Ultra HD Blu-ray playback, 4K streaming and HDR gaming to the feature list. Available in 500GB/1TB/2TB versions. Currently no Atmos/DTS:X. *HCC #264*
- 8 PSB Imagine XA → £350 ★★★★★**
 These two-way Dolby Atmos-enabled upfiring speakers are fairly chunky, but work well at creating a height layer and the £350-per-pair ticket makes them an enticing option. *HCC #264*
- 9 DVDO iScan Mini → £275 ★★★★★**
 HDMI 4K upscaler (using Silicon Image's VRS processing) that teases sharpness from HD and SD sources. A good fit for an entry-level or mid-range 4K TV. *HCC #264*
- 10 Devolo dLAN 550 Wi-Fi Starter Kit → £100 ★★★★★**
 Affordable Powerline option bringing stable data transmission (plus Wi-Fi) to an additional zone via mains wiring. Extra plugs sold separately for £60. Not the fastest around. *HCC #260*

TECH INFO: MEDIA PLAYERS



What about my TV?: Most flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Philips, Hisense, etc) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

Storage: You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

TOP 5 Blu-ray/DVD boxsets

**Gotham: The Complete Second Season**

The second helping of this pre-Batman TV series ups the number of loopy villains and retains the gorgeous set design. Solid AV quality across the four-disc BD package.

★★★★★

**Gomorrah: Complete Seasons 1 & 2**

Thrilling Italian crime drama based on the same book as the 2008 film. This seven-disc set changes the audio from LPCM 2.0 for S1 to DTS-HD 5.1 mixes for the second run.

★★★★★

**Mr. Robot: Season One**

Brilliant tech-infused TV thriller/drama series that already has us psyched about Season Two. Music-minded DTS-HD Master Audio 5.1 mixes grace this boxset's ten Full HD encodes. Not many extras, though.

★★★★★

**Dissent and Disruption: Alan Clarke at the BBC (1969-1989)**

Mega boxset with a mega price tag (£150) featuring a comprehensive collection of Clarke's work spread across 11 BDs and two DVDs.


★★★★★


**The Walking Dead: The Complete Sixth Season**

More zombie-killing antics from US network AMC, again shot on 16mm film and blessed with stomach-churning surround mixes. Plenty of extras to sink your teeth into, too.


★★★★★

TOP 10 Soundbars & Soundbases


- 

Yamaha YSP-5600SW → £1,900 ★★★★★
 With its 46 drivers (including upfiring) this premium 'bar delivers precisely-steered and immersive audio, even of the Atmos variety. Potent wireless sub and 4K-capable HDMI switching sweeten the high-end deal. *HCC #254*
- 

Canton DM55 → £330 ★★★★★
 Canton's smallest soundbase still delivers big sonic thrills. Twin woofers underpin clean and crisp mids and highs, and build quality is first-rate. Doodle to use. Bluetooth built-in. *HCC #260*
- 


Samsung HW-K950 → £1,300 ★★★★★
 Soundbar with additional wireless rears and Dolby Atmos support via four upfiring drivers. Impressively largescale performance, good connectivity. No native DTS support. *HCC #263*
- 


Sony HT-XT3 → £450 ★★★★★
 A great-sounding soundbase blessed with HDMI connectivity, HDCP 2.2, Wi-Fi, Bluetooth, multiroom support, screen mirroring and app control. There's little to complain about. *HCC #250*
- 

Geneva Model Cinema → £550 ★★★★★
 The Swiss brand comes up trumps with this five-driver Bluetooth-capable soundbase. It musters a massive sound with huge dynamics, rich bass and articulate highs. *HCC #261*
- 

Q Acoustics Media 4 → £330 ★★★★★
 A no-nonsense offering from the speaker specialist, which ignores HDMI inputs and daft DSP modes in favour of creating a nuanced, solid 2.1 soundscape. *HCC #238*
- 

Sony HT-RT5 → £500 ★★★★★
 Sony joins the growing 'soundbar with wireless surrounds' market with an enjoyable debut that packs some worthwhile DSP modes and plenty of media-savvy functionality. *HCC #257*
- 

DALI Kubik One → £800 ★★★★★
 The Danish speaker brand brings a slice of glamour to your setup with this stylish soundbar. No HDMI or digital decoding but it packs a tight, lively and nuanced sound. *HCC #248*
- 

Acoustic Energy Aego Sound3ar → £200 ★★★★★ NEW ENTRY
 Smallscale second-room option impresses with its punch and clarity, but a few EQ tweaks would have been nice. No HDMI connectivity. *HCC #264*
- 

Orbitsound A70 → £500 ★★★★★
 Not overly specified – there's no HDMI, for instance – but this elegant 'bar/sub combi just about justifies its price tag with an enveloping and very well-balanced performance. *HCC #251*

TECH INFO: TV PLATFORMS



TV addicts – go free, or pay-to-view?:

The analogue switch-off has created a competitive market in free-to-air platforms, while Sky and Virgin Media are squaring up to the likes of EE TV, Amazon Prime and Netflix. Deciding which service is right for you can be complex, and you may find your needs are best catered for by a combination.

Sky+HD: The long-running satcaster offers a plethora of HD channels, with content including recent movie releases, live sports and sought-after US shows. Hardware options include the 2TB dual-tuner PVR. Premium Sky Q service offers wireless multiroom and 4K content among its tricks.

Virgin Media TiVo: The cable giant offers a three-tuner PVR (1TB) with intelligent TiVo recording tricks, catch-up apps (including Netflix and Spotify), and over 240 channels (depending on package). Premium Sky content can be added on a monthly basis.

Freeview: Common option when it comes to TVs and STBs. Freeview offers 13 HD channels plus SD and radio. Freeview Play adds IPTV integration to the EPG – and you'll find it on some Panasonic TVs.

Freesat: Satellite service offering a similar – but not identical – channel lineup to Freeview, delivered via a dish but without a subs cost. Budget-priced STBs are available.

YouView: This relatively new kid on the block integrates the UK's main catchup portals directly into a backwards EPG. Again, channels are broadly similar to Freeview and there's no contract. Humax (PVRs) and Sony (TVs) are leading the hardware charge.

TOP 5 Back-catalogue Blu-rays



Bad Boys/Bad Boys II: 20th Anniversary Edition
 The first time Michael Bay's brash sequel has been available on Blu (joined by the original). It arrives with an eye-popping HD image, zippy DTS-HD 5.1 mix and lots of archival extras. ★★★★★



The Tragedy of Macbeth
 Roman Polanski's brutal 1971 Shakespeare adaptation is chosen as one of the first Criterion Collection Blu-rays to hit the UK. A new hour-long doc is the pick of the extra features. Audio is 3.0-flavoured. ★★★★★



Killer Dames: Two Gothic Chillers by Emilio Miraglia
 Double bill of terrific '70s murder mysteries from the Italian *giallo* director bundled into a fan-pleasing set with chat tracks, featurettes, trailers, interviews and a 60-page booklet. ★★★★★



Highlander: 30th Anniversary Edition
 Everyone's favourite flick about an immortal Scot with a headhunting hobby benefits from a 4K clean up – although grain is still heavy – and a decent bunch of bonus bits. ★★★★★



Citizen Kane: 75th Anniversary Edition
 Warner's excellent 4K restoration of this classic flick gets a UK outing on a premium Blu-ray release – extras include commentary tracks, a 48-page book and more. ★★★★★

Audio *Express*

Hot Deals on top brands, plus FREE **overnight*** delivery!

Prices Include VAT • Brand New Equipment (NOT graded) • 2 Year Guarantees • Authorised Dealers For 27 Years

 <p>DOLBY ATMOS NEW!</p> <p>Yamaha RX-A2050 9.2 network receiver</p> <p>£1499 £999</p>	 <p>DOLBY ATMOS NEW!</p> <p>Denon AVR-X2300 7.2 network receiver</p> <p>£499 IN STOCK NOW!</p>	 <p>DOLBY ATMOS</p> <p>Denon AVR-X3300 7.2 network receiver</p> <p>£799 IN STOCK NOW!</p>	 <p>DOLBY ATMOS</p> <p>Yamaha RX-A860 7.2 network receiver</p> <p>£1099 IN STOCK NOW!</p>
 <p>Canton DM 75 (Glass) Soundbase</p> <p>£399 £349</p>	 <p>Tannoy HTS101 XP 5.1 Speakers</p> <p>£599 £379</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">HOME CINEMA</p>  <p>Q Acoustics 3000 (5.1) (Mint, Ex Dem)</p> <p>£699 £499</p>	 <p>Q Acoustics 7000i (5.1) Speaker system</p> <p>£899 £649</p>

Over 250

www.audio-express.co.uk

Hot Deals!

 <p>Cyrus Lyric 09 CD / DAC / DAB / Network amp</p> <p>£3000 £1599</p>	 <p>Yamaha R-N602 Network Stereo Receiver</p> <p>£449 £339</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PURE STEREO</p>  <p>Marantz PM8005 Integrated amp</p> <p>£999 £579</p>	 <p>Q Acoustics Concept 20 (Mint, Open Box)</p> <p>£349 £249</p>
 <p>Neat Motive SX2 Speakers (Very Slight Cosmetic Seconds)</p> <p>£1479 £879</p>	 <p>Neat IOTA Speakers (Very Slight Cosmetic Seconds)</p> <p>£735 £499</p>	 <p>Tannoy XT6F Speakers (Very Slight Cosmetic Seconds)</p> <p>£999 £649</p>	 <p>Canton InCeiling 865 In-ceiling Speakers (1 pair)</p> <p>£399 £189</p>

* Overnight delivery - terms and conditions apply; please see website for details.



Audio *Express*

Over 1000 five star customer reviews

"Shop with confidence!"



TOP 5 PVRs



Virgin Media TiVo, £subscription

This triple-tuner PVR offers recording flexibility, useful features – you can undelete deleted shows! – and smart TiVo functionality. If you're in a cable area, consider it.

★★★★★



Sky Q, £subscription

Sky's new top-tier product offering dazzles with its image-rich user interface, wireless multiroom skills and recording flexibility delivered by the PVR's 12 tuners. Now supports 4K content.

★★★★★



Humax HDR-1100S, £190

Freesat Freetime PVR that impresses with its usability, VOD options and form factor – Humax's small, white box will slot into any kit rack. We tested the 500GB version – 1TB and 2TB models are also available

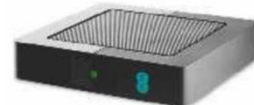
★★★★★



Humax DTR-T4000, £subscription

This YouView-based PVR is required to get BT Sport's new Ultra HD channel – available to those with BT fast fibre and a BT TV sub. Easy to use and with 1TB of storage

★★★★★



EE TV Smart Box £subscription

This quad-tuner 1TB PVR, from the mobile/broadband corp, offers innovative Replay 24-hour channel recording and great Smart device streaming. Needs more catch-up though

★★★★★

TOP 5 Headphones



Sony MDR-HW700DS, £800

Comfy cans supplied with an HDMI surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late-night listening

★★★★★



Sony MDR-1ABT, £300

Another cracking Sony pair with a good sonic balance, here with integrated Bluetooth allowing for cable-free movie watching (although they can be used wired too). Large design perhaps not suited to travel

★★★★★



Lindy Cromo NCX-100, £100

A cost-effective domestic option and great for travelling, these noise-cancelling 'phones (which can also be used as a normal passive design) feature a pleasant, balanced sound

★★★★★



PSB M4U1, £220

Aimed at both home and on-the-move use (and supplied with a carry case and two cable options), the M4U1s offer solid bass response and impactful highs. Build quality is good, as is comfort

★★★★★

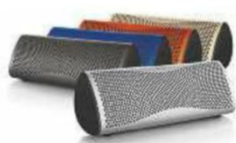


Bose QC35, £290

The latest in the QuietComfort range ditches the wired connection in favour of Bluetooth but retains Bose's luxurious styling and rich performance. Noise-cancelling mode is very efficient.

★★★★★

TOP 5 Wireless speakers



KEF Muo, £300

Portable Bluetooth speaker that's a cut above much of the competition. KEF's sonic knowhow results in a punchy, dynamic presentation that cherishes lossless rips. Excellent build quality

★★★★★



Sony SRS-X11, £60

An affordable palm-sized Bluetooth speaker with internal rechargeable battery, Sony's SRS-X11 is supremely portable and sounds decent for the money. A neat little gizmo. Get two and they can work in stereo

★★★★★



Samsung WAM7500, £500

Also known as the R7, this addition to Samsung's multiroom system delivers authentic omnidirectional sonics via its super-stylish oval-shaped enclosure. Expensive, but excellent

★★★★★



Simple Audio Listen, £400

Desktop stereo speakers with Bluetooth support, these benefit from separate tweeter/midbass units and a classy construction. Performance is well-balanced, and a subwoofer output is offered for extra bass

★★★★★



Star Wars Bluetooth speakers, £150 each

Bring a touch of fun to your tunes with these Stormtrooper and C-3PO replica Bluetooth speakers from ACWorldwide. Solid sound quality and gorgeous styling

★★★★★

HOME CINEMA

Choice

ISSUE
#266 ON SALE
Oct 27

→ IN THE NEXT ISSUE

Audio excellence 50 great-sounding Blu-rays to rock your home cinema

BD classics We chat to the head of new Blu-ray label Indicator about its limited edition releases

VHS RIP Waving goodbye to the classic format

→ HARDWARE

Marantz NR-1607 AV receiver **Samsung 49KS8000**

4K HDR TV **Yamaha YSP-2700 sound projector**

Philips 55PUS6401 **Hisense 75in 4K flagship**

PLUS News, software, opinion, AV rooms and more!

CONTENTS SUBJECT TO CHANGE – BUT ONLY FOR THE BETTER



AV Avenger

With the launch of the PS4 Pro, has Sony declared game over for 4K UHD Blu-ray? And is the games industry about to kill our obsession with resolution? **Steve May** has a lot of questions

SONY'S DECISION NOT to include a UHD Blu-ray player in the latest iteration of its PlayStation console is a massive set back for the nascent format.

Sony's justification, at least officially, is philosophical. A trend from physical media to streaming means there's no longer any imperative to support UHD Blu-ray, we're told. This is, of course, hokey. The real reason is cost. How much better it would have been for Sony to say 'We could have put in a UHD player but we would never have hit our price point.' Instead, Sony's PlayStation division has tossed the UHD Blu-ray format under the bus, undermining the company's own CE plans in the process.

The long-term implications for 4K UHD Blu-ray are ominous. Support on PS4 Pro would have expanded the playback park by millions. Sony estimates that it will sell 20m PS4 consoles this year alone (that's a mix of all iterations) – and Blu-ray disc attachment rates for gamers are traditionally high. UHD Blu-ray's survival prospects appear to have gone from decent to debatable overnight.

Standing up for standalone players

From a home cinema purist point of view, though, the PS4 Pro's lack of 4K Blu-ray support doesn't amount to a hill of beans. While I appreciate the convenience, I personally wouldn't advocate using a games console for Blu-ray because the user experience is a bit rubbish. I was always down for owning both a dedicated player and a PS4 (and I advise everyone else to do the same).

Interestingly, the arrival of the Pro also brings the debate about the very nature of 4K content into the games world. It's been a bone of contention with 4K Blu-ray releases, where 2K assets are often derided. With gaming it's going to get even more complicated,

as the PS4 Pro offers developers *carte blanche* when it comes to presenting content.

According to lead hardware architect Mark Cerny, the GPU inside the PS4 Pro is roughly twice as powerful as that in the original console, with CPU clock rate and bandwidth also boosted. This extra horsepower can be exploited in various ways.

Unlike the PC gaming world, where players manage levels of clarity, texture and frame rates, PS4 games will feature preset modes suitable for different displays. Typically, owners will have the choice of a graphically-enhanced 4K version of a title running at 30fps with HDR, or an improved 1080p version, also with HDR, running at 60fps. I wouldn't be surprised if the latter provides a better experience – but at least 4K TV owners will have a choice.

But here's the crux: game developers are free to come up with various ingenious ways to render a 2,160p output. Suddenly 4K is no longer an imperial guarantee of uniform extra resolution, but more a mantle for a variety of enhancements.

When asked if the PS4 Pro version of *Mass Effect: Andromeda* will output at native 4K or be 'upscaled', Johan Andersson, Technical Director of software house Frostbite, replied on Twitter: 'Neither, custom.' And that's quickly going to be the norm.

This is bad news for pigeon-holing pedants, because the future of visually enhanced games and movies is no longer going to be quantifiable by native resolution. Suddenly UHD becomes a far more appropriate monicker than 4K, as greater colour gradation, HDR contrast improvements and a general clarity lift set about transforming the graphical experience into something way better than we've had before ■

Is a Sony PlayStation 4 Pro on your shopping list? Let us know: email letters@homecinemachoice.com

Steve May is looking forward to just staring at *Mass Effect: Andromeda* in awe and not actually bothering with learning how to play it





musicCast

Wireless Music System



YSP-5600



HDCP 2.2

AirPlay

Bluetooth

Wi-Fi

ECO

High-Res
Audio



Soundbar began with Yamaha

Continuing to innovate and invent to this very day, the world's first object based audio enabled soundbar was a Yamaha. The YSP-5600 offers real surround sound from a single bar at the front of your room and included in Yamaha's MusicCast multi-room system.



MusicCast Controller App



For more info visit yamaha.com/musiccast

oppo

Pushing Blu-ray forward since it began

Blu-ray



BDP-93EU

"OPPO are to be congratulated
for raising the bar yet again"
AVForums



BDP-95EU

"reference grade kit"
Home Cinema Choice



BDP-103EU

"an absolute triumph"
Home Cinema Choice



BDP-105EU

"the most significant evolution of
the Blu-ray player since the format
was developed"
Home Cinema Choice



BDP-103D

"Reference video processing"
AVForums



BDP-105D

"Blu-ray at its brilliant best"
Home Cinema Choice



What's next...?

oppodigital.co.uk